



# The Euro Crisis and the German Construction Industry

Horst Brezinski<sup>1</sup>, Katrin Brömer<sup>2</sup>

## Abstract

The international financial crisis of 2007/2008 led to a drop of the key interest rate, set by the European Central Bank, from 4.25 % in 2008 to 1.0 % in 2009. Due to the Euro crisis, which followed the international financial crisis, the European key interest rate was lowered even further to 0.75 % in June 2012. These actions were taken to revive the European economy and to assist the struggling states and financial institutions. This led to an enormous increase in the liquidity of banks and a growth in the quantity of money, which ultimately led to increasing expectations about the future inflationary process. Following the traditional transmission mechanism of an increase in the quantity of money, the impact on the construction industry was not astonishing. Residential construction activities in Germany increased – a so-called “escape into concrete gold”.

This effect can be considered an indirectly financed stimulus program for the German construction industry. Whether it can only be observed in Germany or also in the other financially stable EU economies will be investigated in this paper. Moreover, the structural effects on the German construction industry will be examined. Finally, it will be analyzed, whether the construction industry can be considered a winner of the Euro crisis or not.

**Keywords: construction industry, Germany, Euro crisis, residential construction, monetary policy**

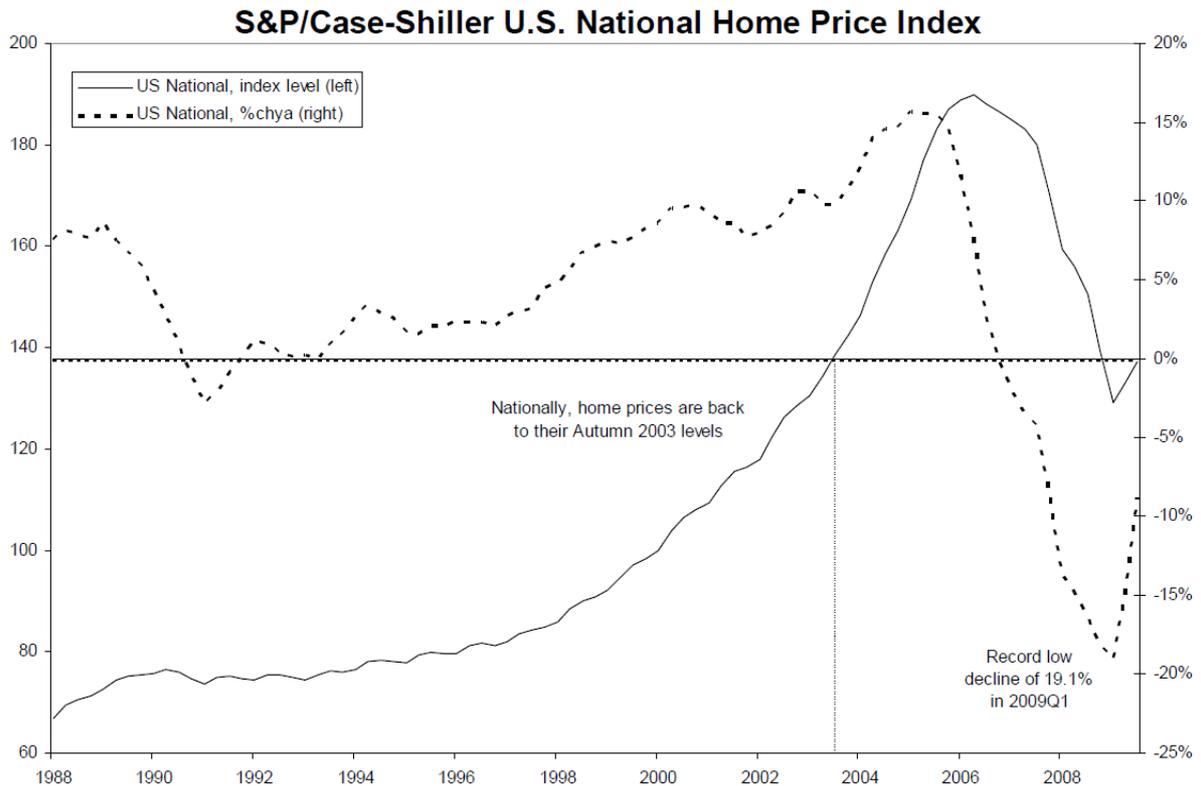
## 1. Introduction

Beyond others, two major factors caused the crisis of 2007: rising house prices due to an expansive monetary policy leading to low interest rates in the U.S. and a failure in the governance of banks worldwide causing a housing price bubble. There have been several price bubbles in the US housing market in the last decades (see Reinhart and Rogoff, 2009) yet this bubble with a dramatic increase in housing prices happened to be the largest in the history of the United States. The Case-Shiller Index pictures the changes in the price level of the U.S. Housing Market (see Figure 1).

---

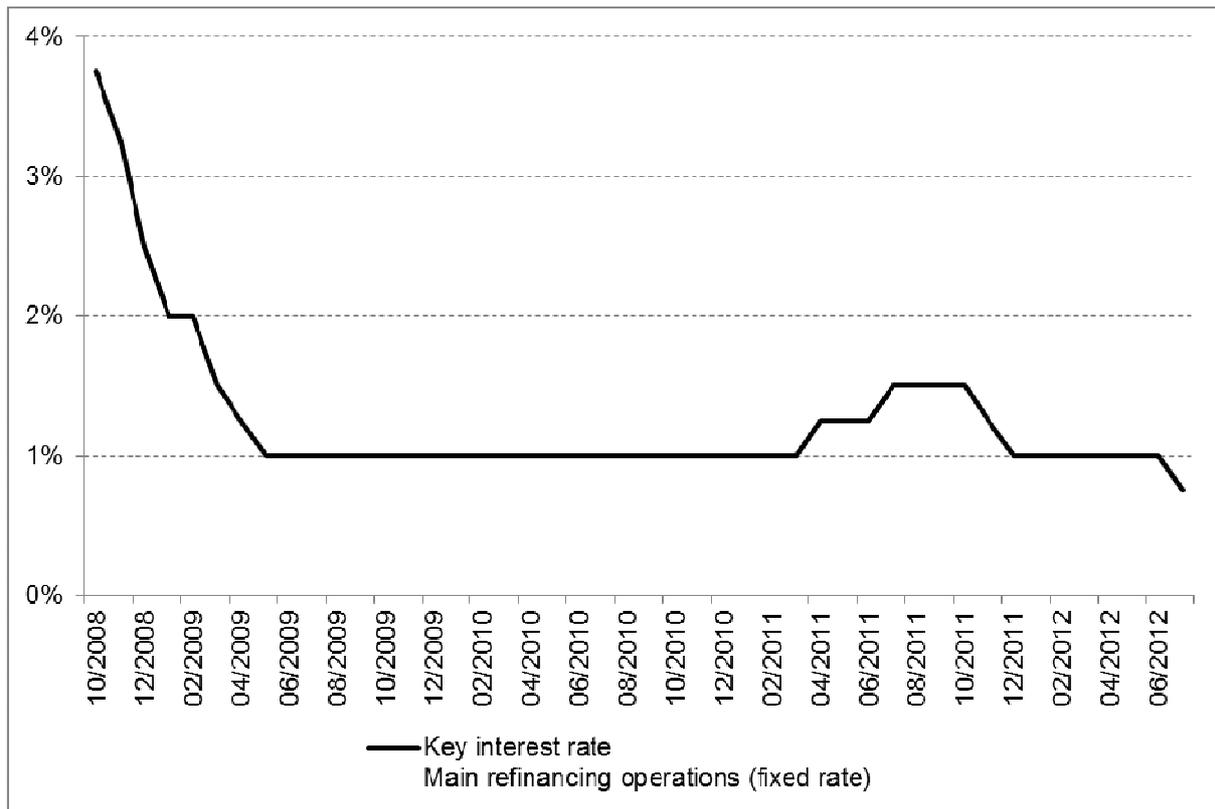
<sup>1</sup> Professor; Chair of International Economics; TU Bergakademie Freiberg; Lessingstraße 45, 09596 Freiberg, Germany; horst.brezinski@vwl.tu-freiberg.de.

<sup>2</sup> Research Assistant; Chair of International Economics; TU Bergakademie Freiberg; Lessingstraße 45, 09596 Freiberg, Germany; katrin.broemer@gmx.de.



**Figure 1** *Development of the S&P/Case-Shiller U.S. National Home Price Index from 1988 to 2009 (Standard & Poor's, 2009, p. 2)*

The so called subprime-crisis has triggered the Euro crisis which is having large impacts on the European economies. The European Central Bank (ECB) reacted on the crisis by lowering the already low interest rates even further.



**Figure 2** *Development of the key interest rate (Main refinancing operations) from 2008 to 2012 (European Central Bank, 2012)*

The European Key Interest rate has never been higher than 4.75 % (as for main refinancing operations). Between 2008 and 2009 it has been lowered from over 4 % to 1 %. The first signs of recovery triggered the ECB to slowly higher interest rates in order to prevent inflation. As it became apparent that the Euro crisis was significantly more serious, the interest rates were lowered again to nowadays a mere 0.75 %.

While many European countries struggle with the crisis, in some European countries the historically low interest rates were of interest for individuals especially when lending money. Combined with the fear of inflation a so-called “escape into concrete gold” or into other material assets such as gold began pushing the residential construction sector amongst others. The demand for private housing, especially condominiums in metropolitan areas, in economically stable countries like Germany rose (see Dorffmeister, 2012a, p.42).

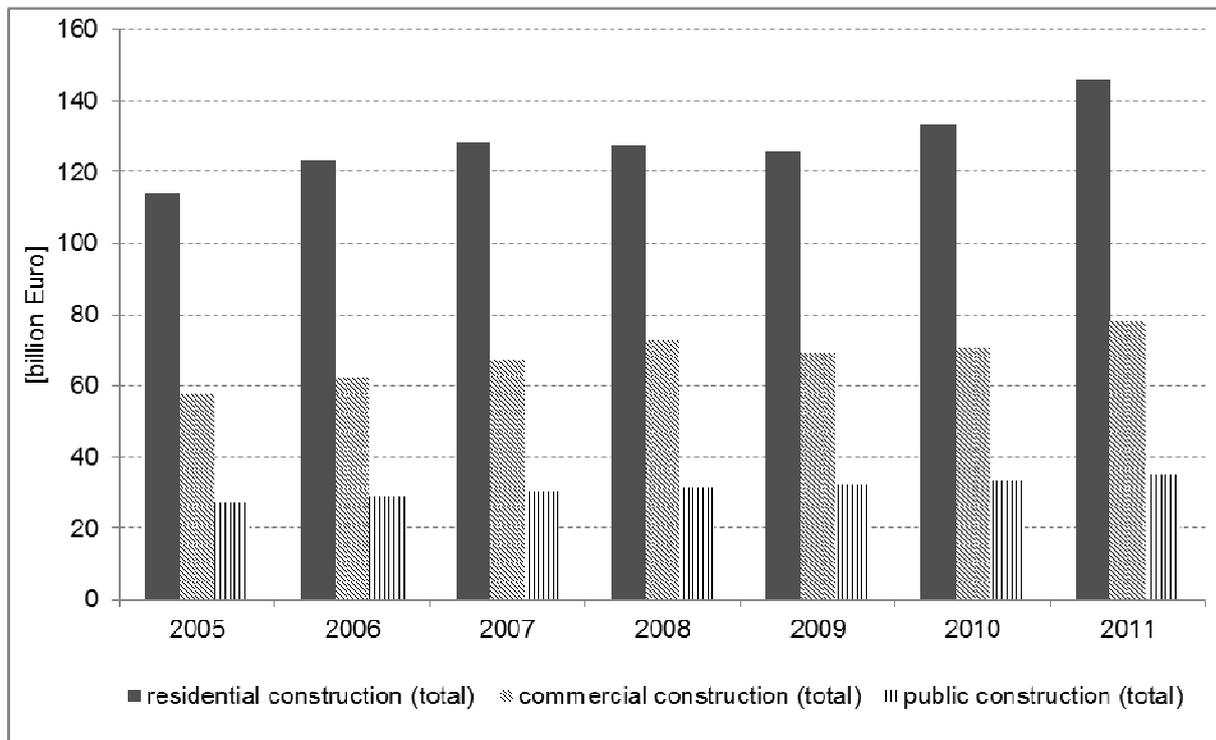
Following the two governmental stimulus programs in the years 2008 and 2009 (see Brezinski and Brömer, 2012) the situation described above can be considered an indirectly financed stimulus program for the German construction industry. In contrast to Germany, not all European countries of the Euro-zone are benefitting from the crisis.

## **2. The effects of the Crisis on the German construction sectors**

The subprime-crisis developed from a US-crisis into a world economic crisis followed by a Euro crisis which did not spare out the German construction sector. Yet, as the general construction business cycle is known as lagging behind by about one year compared to the

business cycle of the overall economy and due to the stimulus programs which the German government implemented, the downward effects were not as drastic as in other industries.

Split up into the three sectors - residential construction, commercial construction and public construction - Figure 3 shows the development of the construction investments in Germany from 2005 to 2011.



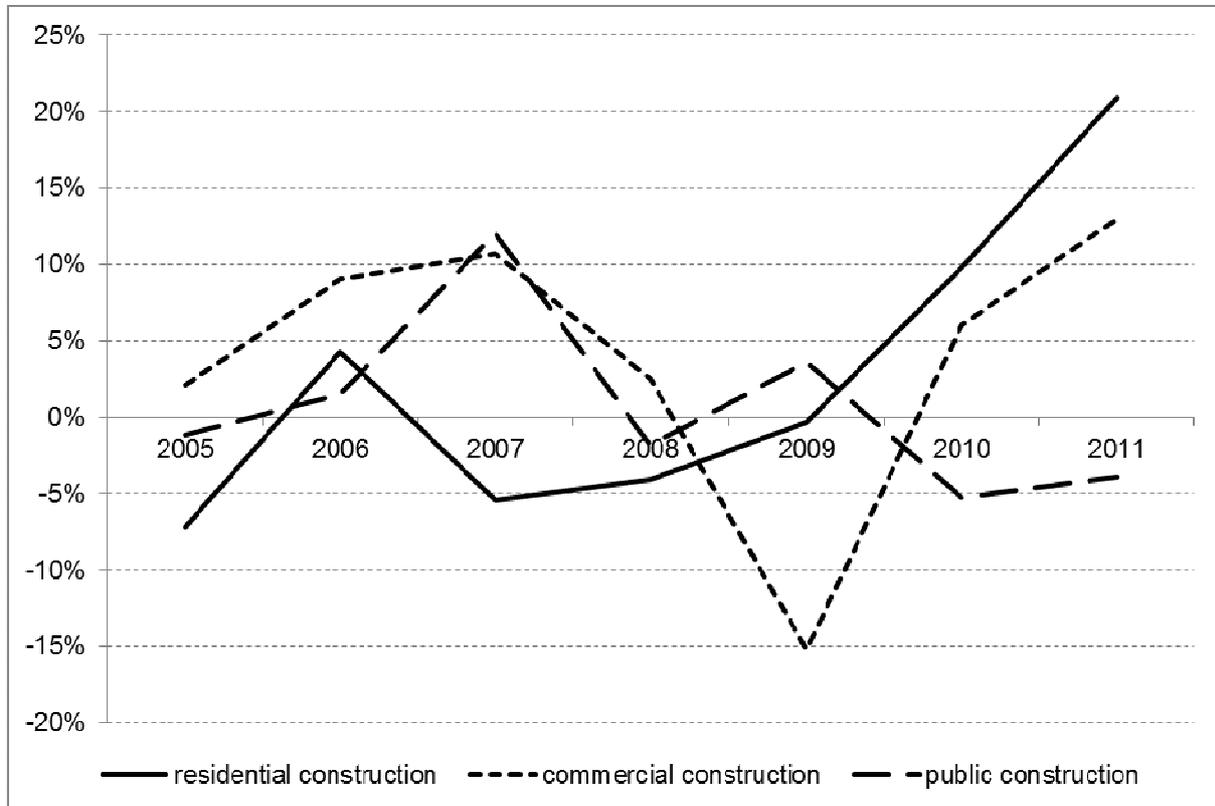
**Figure 3 Construction investments of the sectors residential, commercial and public construction in nominal prices (Statistisches Bundesamt, 2012)**

Residential construction investments are made mostly by private individuals. Public residential construction constitutes only an insignificant share in governmental expenditures. It becomes obvious that residential construction investments contribute the largest part to the total construction investments (see Figure 3). Generally rising from 2005 on, the sector showed a slight decrease of investments in 2009, followed by large increases in the years 2010 and 2011. Quarterly figures for the first half of 2012 show a further growth of residential construction investments.

Commercial construction had a negative growth in 2009 and recovered slowly in 2010. In 2011 the investments of companies in construction climbed up to the highest value of the last ten years.

Public investments include all areas of civil engineering and public housing. However, government investments for residential purposes have been very low compared to the public construction in total, hardly exceeding 2 % of the overall public construction investments in the last decade. Public construction investments in total have been rising during the crisis due to the large stimulus programs which still positively affect the 2011 numbers.

A more detailed picture can be drawn from the changes in the total order value (see Figure 4). The demand for residential construction has been fairly constant until 2009. Since then, the order value is booming. A boom can also be seen in commercial construction whereas public construction has been decreasing since that year.



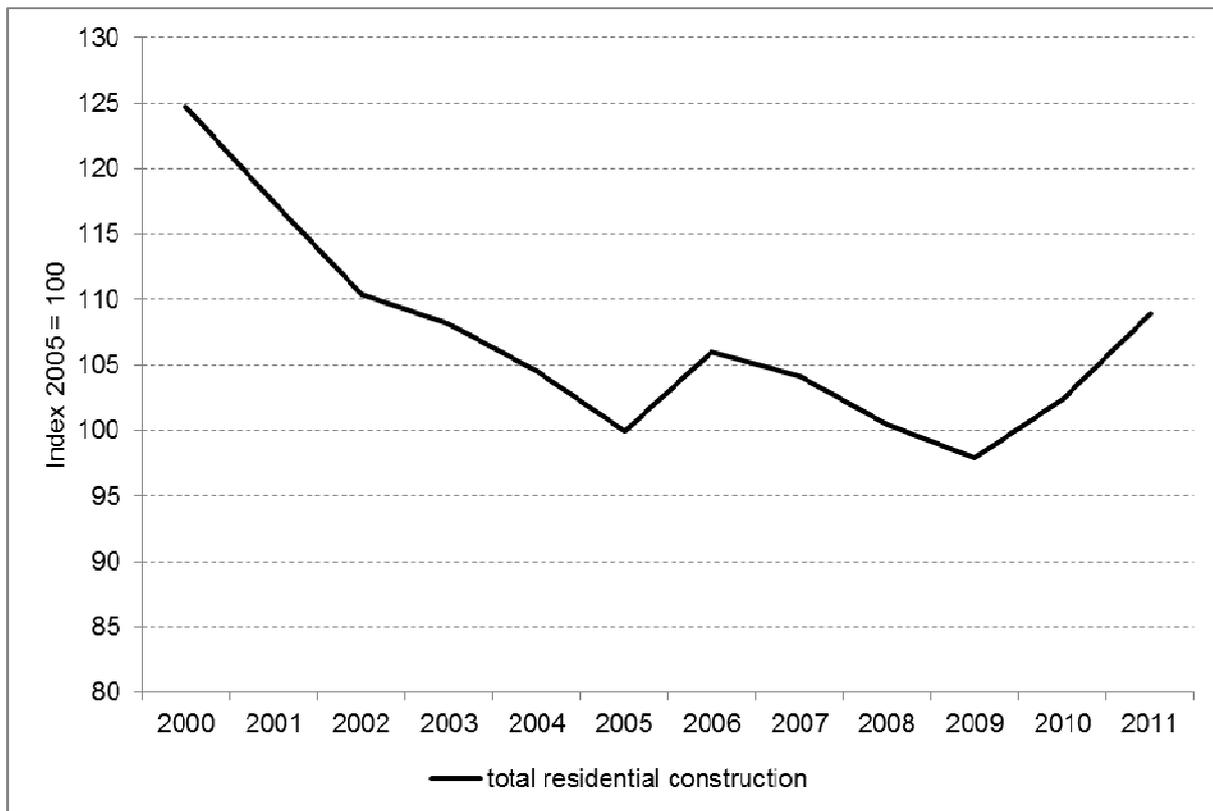
**Figure 4** *changes in total order value (main construction industry, companies with 20 or more employees) of the sectors residential, commercial and public construction (Database ELVIRA)*

Overall, the two sectors, residential and commercial construction, have been affected by the crisis, especially in 2009. Yet, looking at the investments, all three sectors show a rising trend from 2010 on whereas the order value of public construction is already decreasing from 2009 on due to the end of the stimulus programs. Particularly residential construction made a large saltus upwards whereas public construction is expected to fall in the future due to the phase-out of the stimulus programs. There may be a tendency in the future that construction companies allocate their resources to meet predominantly the increased private demand.

### 3. Residential Construction in Germany

After the German reunification the construction sector experienced a large increase in demand as the East German housing and infrastructure were poor and ailing. In 1995, saturation was reached and the residential construction investments stayed at a stable level until 1999. Since then (see Figure 5), investments decreased by more than 20 % within 5 years. The short upswing in 2006 was then once more followed by a decrease causing a

backlog for housing in the country. From 2009 on, residential construction is developing very positively.



**Figure 5** Total residential construction investments in Germany (chained index, 2005 = 100) (Statistisches Bundesamt, 2012)

Apart from the revival of demand for newly built houses and condominiums, the real estate market is also prosperous in Germany. As for construction work, the demand is not equally distributed over the country, but rather focussed on metropolitan areas (Bundesinstitut für Bau, Stadt- und Raumforschung, 2012). In Germany, a large private rental market exists apart from social housing provided by the state so that generally there is no urgent need in building own houses. Furthermore, the German tax system does not advantage private residential construction continuously, even though there have been temporary privileges in the past. In contrast, property taxes exist as well as high transaction costs. Even though the German house prices seem to be more stable than in other countries due to institutional differences (see Muellbauer, 1994, p. 246) and other factors (for more detail, see Kholodilin et al., 2008), house prices have been rising within the last months due to the large demand.

In general, the development of real estate prices depends on the rising of the real disposable per-capita income, the population growth, the long-term real interest rate, the degree of urbanization (Kholodilin et al., 2008) and real income expectations. In Germany, the population growth is negative, the average economic growth is slow compared to other nations and the real estate credit market is relatively non-elastic – all factors, that slow down the rise of real estate prices.

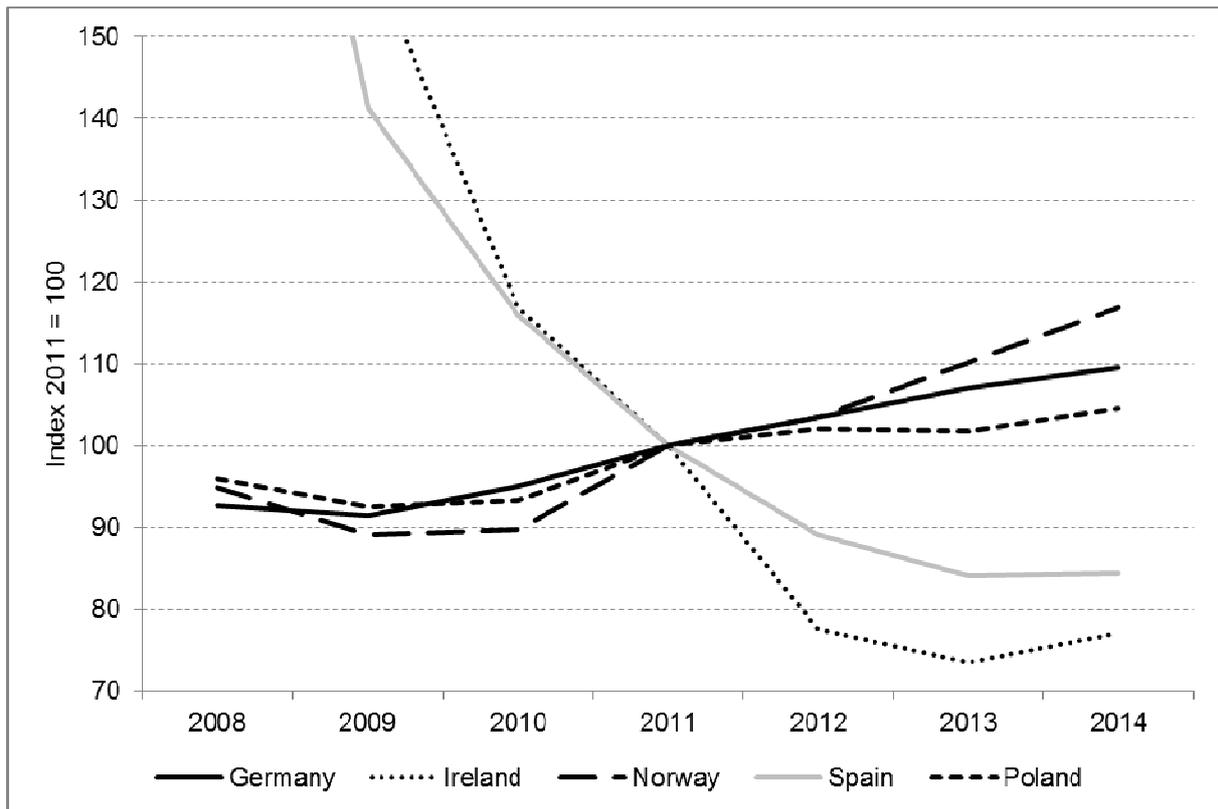
The increase in demand for newly built houses and existing property accompanied by rising real estate prices in metropolitan areas raises the question if a new housing bubble builds up in Germany. According to Kholodilin (2012) there is a threat of a speculative housing bubble looking at the real estate market e.g. in Berlin, but as of today, no housing bubble exists (similar options are shared by Bundesinstitut für Bau, Stadt-und Raumforschung, 2012 and others).

#### **4. Residential construction in other European countries**

Generally speaking, there are different factors influencing the residential construction sector: available and expected real income, financing conditions, the situation on the labour market, demographical effects, housing prices and others (see Dorffmeister, 2012a, p. 43).

The Euro crisis had large negative effects on the European construction sector, especially residential construction. Amongst others, many South European countries, especially Spain, suffered from the dramatic drops in residential construction sector, due to a bursting housing bubble which had its peak during the residential construction boom in 2007. Private households in these financially strongly hit countries refuse to make large property investments due to uncertain economic developments or simply because of lacking financial possibilities. Vacancies and decrease of prices for real estate burden the situation even further.

In contrast, some North and Central European countries find themselves in a totally different situation. Economically stable and financially solid countries such as Norway, Finland, Poland, Switzerland and Germany might be seen as winners of the crisis (Dorffmeister, 2012a). Not just private households invest their money within their home countries, e.g. in "concrete gold". Moreover, foreign capital investors transfer their money from South Europe to stable Central and North European countries. Due to the fear of inflation, investments in material assets like construction and real estate are favored.



**Figure 6** *Development of residential construction volume in selected European Countries (Index 2011 = 100, prices of 2011) (Euroconstruct, June 2012)*

Figure 6 shows the development of the residential construction volume for selected European countries until 2010 and the estimates by Euroconstruct for the next years. Ahead of the crisis, Spain and Ireland had high construction volumes in the residential construction sector, resulting in housing bubbles which busted in 2007/8. As for the future, Spain and Ireland are expected to need another couple of years to reach a steady, yet much lower level in the residential construction sector.

The residential construction sector of Germany, Norway and Poland only had minor decreases during the crisis. From 2010 on, this sector in all three nations increased in prosperity and is expected to keep rising or stabilizing respectively within the next years. The initial situation of these countries was different from those in Spain or Ireland. The European residential construction boom (see Dorffmeister and Gluch, 2011a, p. 37) which ended in 2007 was stimulated by a prosperous economy, high inflation rates, low interest rates, rising housing prices and easy credit initiation. It did not spread equally over Europe – south European countries were particularly affected whereas the situation in e.g. Germany was much more retained. The German residential construction sector was not overheated compared to e.g. Spain: more than one third of the 1.5 million newly build condominiums in 2007 were built in Spain (see Gluch and Dorffmeister, 2011, p. 28). Instead, a backlog in housing construction exists in Germany due to the long recession in the sector after the German reunification.

How long the period of recovery of the European construction sector will be, cannot be predicted as it is dependent on the development of the public debt crisis. According to

estimations of the Euroconstruct summer conference, it might take another couple of years until the European economy returns to growth (see Dorffmeister, 2012b, p. 35). In times of austerity measures resulting in cuts of wages, subsidies and investments, only particular branches might recover.

## **5. Conclusion**

The Euro crisis which followed the global financial and economic crisis had large effects on the construction industries in many European countries. The different impacts on the German construction sector, in particular the residential construction sector, were investigated in this paper. Furthermore, the situation in other European countries was considered as well.

The overall German construction industry has been affected by the crisis, especially in 2009 except for the public construction sector, which profited from the government's stimulus programs. However, the declines of investments and order values were not as drastic as in other countries and recovery began in 2009 already. Although public construction investments are expected to decrease in the future, particularly residential construction has made a large saltus upwards and is expected to rise even further. The positive development in Germany might be due to the long recession, which the residential construction sector went through in the last decade. So far, a new housing price bubble in Germany has not been predicted.

Even though the basic conditions such as interest rates in Europe were the same at the beginning of the crisis, the initial situation in each country was different. The starting point of the international financial crisis was also the end of a European residential construction boom which on the contrary did not capture all countries. The residential construction sector developed very differently in the various European countries. In some North and Central European nations with economic and financial stability e.g. Germany, Poland or Norway, the sector had the possibility to profit from the crisis. In these countries, the fear of inflation is worse than the expectation of lower incomes whereas negative income expectations are the main reason for the downward development in many south European countries, but also Ireland for example, which have experienced a deep recession in the residential construction sector.

The scope of this paper only allows a short insight to the development of the German construction industry, particularly residential construction. Further research should be done in order to econometrically demonstrate the relations between the different factors relating the Euro crisis and the construction sectors.

## References

Brezinski H, Brömer K (2012) "An empirical analysis of the effects of governmental stimulus programs during the financial crisis of 2007 on the German construction industry" *Proceedings of the CIB International Conference: Management of Construction: Research to Practice. CIB International Conference of W055, W065, W089, W118, TG76, TG78, TG81 and TG84*, 26-29 June 2012, Montréal, Canada.

Bundesinstitut für Bau, Stadt- und Raumforschung (ed.) (2012) *Immobilienpreise und Transaktionen am Wohnimmobilienmarkt. Aktuelle Wohnungsmarktentwicklungen und Tendenzen*, BBSR-Berichte KOMPAKT, 10/2012, (available online [http://www.bbsr.bund.de/cln\\_032/nn\\_21272/BBSR/DE/Veroeffentlichungen/AnalysenKompakt/2012/DL\\_10\\_2012,templateId=raw,property=publicationFile.pdf/DL\\_10\\_2012.pdf](http://www.bbsr.bund.de/cln_032/nn_21272/BBSR/DE/Veroeffentlichungen/AnalysenKompakt/2012/DL_10_2012,templateId=raw,property=publicationFile.pdf/DL_10_2012.pdf) [accessed on 10/10/2012])

Dorffmeister L, Gluch E (2011) „Europäischer Wohnungsbau: Moderate Belegung nach dramatischem Einbruch. Ausgewählte Ergebnisse der Euroconstruct Sommerkonferenz 2011“ *ifo Schnelldienst* 64 (15): 36–42.

Dorffmeister L (2012a) „Weiterhin verhaltene Wohnungsbautätigkeit in Europa. Ausgewählte Ergebnisse der Euroconstruct-Sommerkonferenz 2012“ *ifo Schnelldienst* 65 (15): 40–45.

Dorffmeister L (2012b) „Europäisches Bauvolumen: Rückgang in allen drei Teilsegmenten. Ausgewählte Ergebnisse der Euroconstruct-Sommerkonferenz 2012“ *ifo Schnelldienst* 65 (14): 34–40.

ELVIRA Database: **E**lektronisches **V**erbands**I**nformations-, **R**echerche- und **A**nalysesystem (ELVIRA) by Hauptverband der Deutschen Bauindustrie e.V.

Euroconstruct (2012a) "Country Report" *73th Euroconstruct Conference*, London – June 2012, Ed. Experian, London.

European Central Bank (Ed.) (2012) *Key ECB interest rates*, (available online <http://www.ecb.int/stats/monetary/rates/html/index.en.html> [accessed 01/11/2012])

Gluch E, Dorffmeister L (2011) „Europäischer Wohnungsbau auf Erholungskurs - Ausgewählte Ergebnisse der Euroconstruct-Winterkonferenz 2010“ *ifo Schnelldienst* 64 (3): 25–33.

Kholodilin K A, Menz J-O, Siliverstovs, Boriss (2008) „Immobilienkrise? Warum in Deutschland die Preise seit Jahrzehnten stagnieren“ *Wochenbericht des DIW Berlin* (17): 214–220.

Kholodilin K (2012) "Noch gibt es keine Immobilienblase in Deutschland. Fünf Fragen an Konstantin Kholodilin" *DIW Wochenbericht* (45): 14.

Muellbauer J (1994) „Anglo-German differences in housing market fluctuations. The role of institutions and macroeconomic policy” *Economic Modelling* (2): 238–249.

Reinhart C M, Rogoff K S (2008) *This Time is Different: A Panoramic View of Eight Centuries of Financial Crises*, (available online [http://www.economics.harvard.edu/files/faculty/51\\_This\\_Time\\_Is\\_Different.pdf](http://www.economics.harvard.edu/files/faculty/51_This_Time_Is_Different.pdf), [accessed 22/10/2012])

Standard & Poor's (23/11/2009) *Home Prices Show Sustained Improvement through the Third Quarter of 2009 According to the S&P/Case-Shiller Home Price Indices*, Press Release (available online <http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldocumentfile&blobtable=SPComSecureDocument&blobheadervalue2=inlin e%3B+filename%3Ddownload.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1245195279567&blobheadervalue3=abinary%3B+charset%3DUTF-8&blobnocache=true> [accessed 22/10/2012])

Statistisches Bundesamt (Ed.) (2012) *Volkswirtschaftliche Gesamtrechnungen. Beiheft Investitionen*, (available online [https://www.destatis.de/DE/Publikationen/Thematisch/VolkswirtschaftlicheGesamtrechnungen/Inlandsprodukt/InvestitionenPDF\\_5811108.pdf?\\_\\_blob=publicationFile](https://www.destatis.de/DE/Publikationen/Thematisch/VolkswirtschaftlicheGesamtrechnungen/Inlandsprodukt/InvestitionenPDF_5811108.pdf?__blob=publicationFile) [accessed 08/10/2012])