EMLAK KONUT

REAL ESTATE INVESTMENT COMPANY

THE PARTICIPATION OF T.C. ENVIRONMENTAL AND URBANIZATION MINISTERY TOKİ
(HOUSING DEVELOPMENT ADMINISTRATION)

OVERVIEW OF THE REAL ESTATE AND HOUSING INDUSTRY

MAY 2018

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May 2018

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ABBREVIATIONS

USA: United States of America

EU: European Union

BRSA: Banking Regulation and Supervision Agency

BRIC: Grouping acronym that refers to Brazil, Russia, India, and China

BRICT: Grouping acronym that refers to Brazil, Russia, India, China and Turkey

BIS: Bank for International Settlements

BoE: Bank of England

BoJ: Bank of Japan

CDS: Credit Default Swap Insurance

WB: World Bank

ECB: European Central Bank

EMBI: Emerging Markets Bond Index

EUROSTAT: Statistical Office of the European Union

FED: US Federal Reserve

MOVE Index: Merrill Lynch Option Volatility Estimate

REIT: Real Estate Investment Trust

GDP: Gross Domestic Product

RES: Real Estate Certificate

GYODER: Association of Real Estate and Real Estate Investment Companies

IMF: International Monetary Fund

CGF: Credit Guarantee Fund

OECD: Organization for Economic Cooperation and Development

OPEC: Organization of the Petroleum Exporting Countries

MTP: Medium-term Program

DC: Developing Countries

DC: Developed Countries

MPC: Monetary Policy Committee

PBOC: People's Bank of China

PPP: Purchasing Power Parity

CMB: Capital Markets Board of Turkey

TOKİ: Housing Development Administration of Turkey

CBRT: Central Bank of The Republic Of Turkey

CPI: Consumer Price Index

TurkStat: Turkish Statistical Institute

THPI: Turkey Housing Price Index

TKGM: General Directorate of Land Registry and Cadastre

TNHPI: Turkey New Housing Price Index

D-PPI: Domestic Producer Price Index

UN: United Nations

VIX: Volatility Index

WEO: World Economic Outlook Report

PREAMBLE

Emlak Konut REIC has been a major corporation in the Turkish construction and real estate industries uninterruptedly for over 65 years. Close examination of the Turkish housing industry has turned into a management approach for Emlak Konut REIC resulting from a corporate culture and management approach developed over the years. Our company enjoys a management approach that continuously raises standards in the real estate industry thanks to the brand value it has created over many years. The company assumes a social awareness leadership especially in building systems, design, environmental and business practices.

Turkey has seen significant advances in its construction and real estate industries, especially after the 2001 economic crisis, thanks to our accomplishments both for the country and for the industry. Emlak Konut REIC does more than its share in this advancement by supporting the construction industry.

Aware of the importance of "factual information," our company commissions this "Real Estate and Housing Report" and submits it to all its stakeholders. Our goal is to provide accurate, understandable and interpretable information on the construction and housing industry.

First published in the third quarter of 2014, the document draws considerable interest from local and foreign investors, analysts, stakeholders and other individuals in the industry. We have started to publish it now semi-annually in line with the requests to properly explain our industry.

The sixth edition of the report features macroeconomic realizations (trickling down from global to country and industry level), and then construction-housing industry analyses following relevant the projections.

The public opinion observes that 2018 construction and real estate industry expectations and predictions are frequently expressed. Our report examines and presents the data to the concerned parties with justification to better understand such expectations and analyses. Transparent examination of industry data will not only improve the effectiveness of the related markets but also shed light on pricing discussions. We respectfully submit our report to all the parties and stakeholders in the industry.

INTRODUCTION

Emlak Konut REIC continues to perform its operations while carrying out assessments on the past and future. Therefore, it keeps a close eye on economic variables as well as industry and business developments.

The company periodically performs macro- and microeconomic, financial and demographic analyses, and bases its executive decisions on these analyses. Conducting special analyses has become a necessity for all stakeholders in the face of rising data and analyses needs, in parallel with the fast growth of the construction and housing industry over the past 15 years. Under this responsibility, Emlak Konut REIC offers comprehensive analyses to the public on the economy and housing industry, particularly in its annual reports but also in interim financial reports.

Our report aims to share accurate information and data with all stakeholders – now an intensely felt industry requirement.

The following report primarily examines the Turkish economy and housing industry as well as related main trends. The report consists of four parts.

The first part examines developments in the world economy; and in particular, in the concept of "the new normal" in post-2008 crises up until now. We have limited the scale of economic growth while giving priority to the analysis of the industry-related variables.

The topics in second part address the general outlook of the Turkish construction industry, the industry's impact on the country's growth, production, revenue variables, demographic aspects that affect the industry, and the projections. Finally, this part looks at the effects of construction costs and interest rates on the industry.

The third part, also the report's final section, explains the changes in global housing prices, the asset and housing bubble concepts, and the analysis of housing prices in Turkey, as well as examining the elements influencing future price projections.

Emlak Konut, the largest Real Estate Investment Trust in Turkey, strives to shed light on the industry with this report and fulfill its responsibility as an industry leader by providing accurate information.

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The construction industry and other related sub-industries are the most crucial aspects of the economy. The Turkish housing industry has achieved fast growth in the past fifteen years. The macroeconomic importance of the construction industry arises from its multiplier effect. It sets 250 sub-industries in motion with impacts on both growth and employment.

It is clear that the construction industry and variables of its components must be analyzed meticulously at certain intervals. Variables that are assumed to have less effect occasionally cause more considerable effect, while it is vice versa in other times. For example, a rise in housing loan interests reduces consumer demand in addition to increasing production costs. However, consumption sensitivity towards interest becomes lower in certain periods.

The concept of housing prices is another critical issue discussed in socioeconomic terms. The housing industry outlook accurate pricing constitute a critical indicator, not only for the industry but also for the entire economy. This is of vital importance for central banks and economic policymakers.

Even though some economic and finance methods exist for the analysis and formation of asset prices, it is still impossible to establish correct prices for all times and places. This is mainly due to the rise of occasional predominant factors related to humans and other relevant behavioral patterns. They are hard to measure. Furthermore, a homogeneous comparison becomes impossible since especially the housing projects vary from each other greatly in terms of location, size and social means.

We found that there is no bubble in the Turkish housing market based on the question "Whether there is a price balloon in the Turkish housing market" as frequently discussed in the public opinion. Analyses based on the latest data show that price increase is following a reasonable trend.

In the light of our analysis from the previous reports and the current one, we have determined that there is no "price balloon" in the Turkish Housing Market. Housing prices across Turkey (HPI) increased in real terms by 45.49% on average between January 2013 and January 2018. The new housing price index achieved a 38.57% real price increase in the same period. These data show that the market is far from an 'asset bubble.' Both indices have seen an acceptable growth rate. Based on this increase, the industry can be said to have a moderate vitality.

However, we can see regional and/or district-based bubbling trends. For the analysis of such price movements, it should also be noted that relevant regions may have their own price dynamics. Our analysis below summarizes the developments in the Turkish real estate market.

- In this period, the real price increase was 69.48% in Istanbul, Turkey's most important housing, and real estate market. Istanbul was followed by Aydın-Denizli-Muğla region and then by Izmir with 64.27% and 59.23% increases, respectively.

- Keeping track of the following points would be appropriate as the main factors affecting the price in Istanbul and its immediate vicinity. Ongoing foreigner demand, buoyancy brought by infrastructure investments, the presence of an elastic supply-demand structure, the fact that cost increases are not fully reflected in prices, internal and external immigration, central location in terms of global transportation, historical and cultural characteristics.

- Izmir indicated the second-best performance among the three major cities. Real prices rose by leaps and bounds reaching 59.23% between January 2013 and January 2018.

- On the other hand, Ankara, the capital city, posted the most moderate price movement among the three major real estate markets due to a gradual increase. Real prices rose by 14.25% between January 2013 and January 2018.

- We see effects of the summer resorts and coastal towns in price changes calling this 'summer house and immigration effect.' The most typical examples are Antalya, Denizli, Aydın, and Muğla.

- The ongoing 'Gulf effect' and periodic motives seem to have supported the price increase in the Black Sea region. The real price increase in Artvin - Giresun - Ordu - Rize - Trabzon region stood at 38.36% between January 2013 and January 2018. Here, the share of foreign purchases in Trabzon has proven effective.

- It should be noted that there may be price changes in different districts, neighborhoods, and streets of the same cities as all the evaluated data point to an increase in the average price.

- As indicated in the definition of the bubble by R. Shiller, a real price increase exceeding 100% in the last five years may be described as an 'asset bubble.' However, in both Istanbul and other regions, higher small-scale price increases may also occur at neighborhood or street level due to the location of the property, various characteristics and consumer behaviors.

We observe significant changes regarding trends if we analyze seasonal price changes[1];

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[1]   You can find the related table in Section 3.3.1.

- The overall price increases in Turkey materialized as 1.46% for the period January 2013-January 2018 compared to June 2012-June 2017. On the other hand, the new house prices rose by 2.43%. The rate of increase declined both in the Turkish Housing Price Index and the New Housing Price Index. On the other hand, we observe that cost increases lie behind slightly higher price increase of the New Housing Price increase.

- Although Istanbul continues to rank first in terms of nominal price increase, it indicated a negative real price increase registering an 8.51% loss in January 2013-January 2018 period compared to June 2012-June 2017 period. This price movement can be seen as a price correction as we emphasized in the previous report. Such occasional price fluctuations in asset prices can be regarded as balancing in terms of market dynamics.

- Among the three big cities, Izmir's housing market achieved the fastest real price increase in January 2013-January 2018 period. Real housing price increases in Izmir materialized as 9.39% for the period January 2013-January 2018 compared to the period June 2012- June 2017. The branded housing projects in Izmir and the immigration from other major cities had an effect on the prices.

- Ankara suffered a 0.45% loss in real terms with a price change below Turkey's average between the two relevant periods. However, one should not overlook that there is a slowdown in the real price elasticity in Ankara. The prices reflect the increase in housing supply in Ankara and the impact of immigration to other cities.

- We see an interesting price correction in Gaziantep, Kilis, and Adıyaman regions. Posting the highest price increase until 48 months ago, this region saw a slowdown in the price increase in the last five years with a real decline of -9.78% between the last two periods. In the two-year period, the price decline in this region stood at nearly 30%. Gaziantep, Kilis and Adiyaman region saw the fastest real price decline. Other than the market's rational effort to balance supply and demand, this situation can be interpreted as the impacts of lower demand due to less migration.

- Van-Bitlis-Hakkari region saw 4.48% real price increase for the January 2013-January 2018 as opposed to the period January 2012-January 2017. The region seems to have compensated for the negative price increase in the previous periods with an almost 10% real price increase over the last year. However, real price increases in this region are still well below the national average.

- Artvin-Giresun-Ordu-Rize-Trabzon region saw a 16.28% increase in the period January 2013-January 2018 compared to June 2012-June 2017. The fastest real price increase was seen in Artvin, Giresun, Ordu, Rize and Trabzon region. We can think that the demands of foreigners and the recovery led by TOKİ's construction activities in the region affected this trend.

- Becoming one of the regions with the fastest uptrends in price increase rates in the previous report period, Aydın, Denizli and Muğla region saw a 2.33% real price decline between January 2013 and January 2018. The recovery in the tourism industry in the previous period, the impact of the summer season and domestic investors' demands seem to be influential in these regions. However, we see that rapidly increasing prices have made a slight correction with seasonal effects. On the other hand, ease of travel from Istanbul to the relevant cities thanks to the transportation investments in especially the Aegean region has a potential to create a demand recovery after a certain while.

- The real price increases in Konya, Karaman region, materialized as 1.4% for January 2013-January 2018 compared to June 2012-June 2017. This region can also be said to have experienced a correction movement in its own dynamics.

- Antalya-Burdur-Isparta region had poor price outlook in the past one year. There was a 0.45% increase in real terms between June 2013 and June 2018 compared to the January 2012-January 2017 period.

We see that the housing market strives to seize a dynamism and equilibrium prices as much as possible considering the house prices across Turkey. In this sense;

- The Turkish Housing Market's sub-markets demonstrate dynamic and rational trends. In particular, price movements demonstrate adjustment and increases when necessary. One of the sub-markets with adjustments is the Gaziantep, Kilis, and Adıyaman region while the Aydın, Denizli, Muğla and Izmir region is the most typical example of increase.

- The fact that contractors increases and decreases construction licenses according to market expectations dynamically.

- Giving increasingly rational decisions, the consumers do not only heed the price criterion anymore but rather evaluate many factors such as building quality, materials, and ease of transportation.

- We see that the effects of the July 15 were dealt with quickly. At this stage, the campaigns of the branded house manufacturers (such as Emlak Konut REIC and GYODER members) made important contributions to creating positive expectations and boosting morale in the industry. The launch of similar campaigns in different scales from time to time accelerates not only the branded housing producers but also the entire industry.

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- The financing models formed jointly and periodically by corporate firms and banks benefit the industry considerably. However, the industry has a growing need for new models and methods on a day-to-day basis.

- Foreign investors not only look at the quality and quantity of housing but also consider the city as a "life center," which is a remarkable aspect. The most typical example is the house sales to the foreigners in Istanbul.

When examining the concept of real estate, it is beneficial to look at not only the prices on the market but also the underlying costs assumed for manufacturing.

The building construction cost index (BCCI) rose in the fourth quarter by 6.5%, 22.8%, and 19.7% on a quarterly basis, year-on-year basis, and based on the averages of four quarters, respectively. In the fourth quarter of 2017, the labor index and material cost index rose by 1.8% and 7.9% on a quarterly basis in BIME (Building Construction Cost Index). The labor and material indices rose by 13.7% and 25.6%, respectively, compared to the same quarter of the previous year[2].

- The nominal house prices in Turkey increased by 23.48% between January 2017 and January 2018. However, the real increase appears as 3.15% if we deduct the Building Construction Cost Index. The real yield based on the D-PPI (Cost Inflation) is 10.11%.

- The nominal increase rate for the new houses stood at 22.72% in the new period. The BCCI-reduced real price appeared as only 2.52% and the real return based on the D-PPI was 9.43%.

- For Istanbul, the nominal yield for the last year came in at 16.52% based on the index. The BCCI-reduced real price stood at -2.65% and the real yield based on D-PPI was 3.9%. In Istanbul, rapidly increasing costs disrupt contractors' cash flows in real terms along with housing prices with a slower rate of increase.

- We should note that the figures are based on an average, and they do not fully reflect cost elements such as unexpected financial costs (interest burden-funding cost) and exchange rate burden. As a result, profit margins of the industry materialize at levels lower than thought.

- Cost increases are reflected in sales prices to a remarkably limited extent. Contractors seem to have undertaken costs themselves to a significant extent.

Hedonic House Price Index is calculated through the hedonic regression analysis to separate it from the quality impact of the housing price index that is calculated by the CBRT. According to results, approximately one-fourth of the nominal increase in the house prices across Turkey and approximately half of the real increase can be said to result from quality increases[3].

A crucial point to be considered in the aforementioned price dynamics is that market mechanism gradually balances the prices, which recovered in locations with low increase rate and a slowdown in locations with heavy increase rate. This, in turn, is a leading indicator of a housing market that acts increasingly rational.

Housing demand and supply is becoming gradually settled in Turkey. An average of 1.2 million houses change hands annually, and there is also a need for 650,000 new houses each year. TurkStat data put the number of households in Turkey at around 19,481,000. The average household size is 3.8 people. The rate of home ownership was 67.3% in 2015 whereas it was 60.9% in 2006.

Rural to urban migration continues in Turkey. Turkey's current urbanization rate is 78%, and the corresponding population is 60 million. Rural-to-urban migration is expected to continue until 2023 with the urbanization rate exceeding 84%. Accordingly, the urbanized population is estimated to reach 71 million by 2023. Due to migration-related urbanization, housing demand is projected to continue until 2025. Urbanization causes profound differences in the population's characteristics.

The Turkish construction and housing sector will remain one of the engine industries in Turkey. Considering demographic and economic developments, the industry boasts even more potential compared to the rest of the world. However, occasional fluctuations in prices must not be labeled as either collapses or bubbles. Regardless of the asset type, prices do not constantly increase or decrease. Therefore, the industry will be headed for growth in the medium term as long as we preserve national and industry-wide stability and dynamic structure.

The situation in the housing market takes place in a cycle reminding the Cobweb[4] theory. Supply adjusts itself according to the demand with delay by increasing or narrowing the production exceedingly in an effort to establish a balance. In theory, it is possible to see situations called stable, unstable and neutral balance. The increase in individuals' incomes or the expectation that the real estate prices will increase in the future as well as supply side activities such as interest rates and campaigns can also stimulate demand.

The real estate price and supply movements in our country seem to have resulted from the above three

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2   TurkStat, Building Construction Cost Index, 4th Quarter: October-December, 2017", Issue: 30566, January 19, 2018
3   Hülagü Timur, Kızılkaya Erdi, Özbekler Ali, Tuna Pınar, "Economy Notes - Adjustment of the Turkey Housing Price Index from Quality Change Effect"
      CBRT, Issue: 2016-02, February 1, 2016, p.10
4   Cobweb Theorem: It is based on the assumption that price changes cause an immediate reaction to supply and demand quantities.

factors in recent years. However, the importance and weight of these elements vary according to the relevant economic conditions. The period from end-2017 to the present day reminds us of a search for some kind of 'balance.' For a sustainable and stable demand, the scale needs to grow in a macroeconomic dimension together with an income increase. On the other hand, access to funds and ease of cost will also support this process in the short term.

An examination of the first half of 2018 shows that demand has maintained its relative vitality. We also see supply and demand flexibilities for the achievement of the above-mentioned 'market balances.

The housing sale figures as one of the important indicators of the housing industry demonstrate the results of the aforementioned natural demand. The number of sold residential units was 997,550 in 2011, 971,757 in 2012, 1,157,190 in 2013, 1,165,381 in 2014 and it broke a new record by reaching 1,289,320 in 2015. On the other hand, Turkey's housing sales reached a new record, 1,341,453 in 2016 despite the systemic risks faced by Turkey and global issues.[5] The 2017 period saw the sale of 1,490,314 houses.

But it is also true that the economy and essentially the real estate industry need both legal and institutional arrangements to grow in a 'sustainable' manner. For this purpose:

- Making a permanent tax arrangement and offering advantages to especially those buying their first house,

- Providing special exemptions to the industry with the Corporate and Income Tax, the arrangements of which are in progress.

- The possibility of higher sales to foreigners with certain changes to the regulations related to the sale of real estate to foreigners,

- Making lean arrangements regarding value increase and property tax in line with the current circumstances,

- Making zoning arrangements, which are still in progress, according to factors such as population density, infrastructure status, earthquake and other natural disasters as well as urbanization plans,

- Making special arrangements to close the difference between 'official construction value' and 'actual property value' which leads to issues related to the financial markets, tax and purchases/sales and using such source in the urban transformation through İller Bank or as a source for Emlak Bank which can be made operational again will be a positive step.

- As in some countries, the establishment of a mostly public bank that provides long-term housing loans to both individuals and institutions while carrying out a real estate-based "securitization."

- The updating or restructuring of legal regulations in order to issue real estate-based securities through the banks (both deposit banks and participation banks) and capital markets,

- Establishing markets within Istanbul Stock Exchange related to real estate-based rights and real estate securitization

- Maintaining tax exemptions for Real Estate Investment Funds and Real Estate Investment Trusts

- Establishing Infrastructure Real Estate Investment Trusts and offering relevant incentives to municipalities,

- The basic input in the construction of housing for medium and low-income groups and urban transformation purposes (tax reduction in concrete, iron, etc.)

- Characterization of housing sales to exports as exports

- AIR RIGHT (The Transfer of Development Right and related legal infrastructure activities)

- Establishing private cooperatives to meet the housing needs of the low and middle-income groups,

The Turkish economy and the real estate industry adapt to the evolving conditions very dynamically with years of experience. It is evident that the industry will undertake more successful and value-added works if the industry eliminates both production-related and financial insufficiencies.

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5   TurkStat Annual Housing Sales Figures

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PART ONE

1. Developments in the Global Economy and Turkish Economy

1.1. Developments in the Global Economy

This section analyzes the changes in the world economy and their effect on countries' economies briefly. The analysis goes from macro to micro examining the changes to the key variables in the relevant period. It has become a necessity to keep up with all crucial developments as a result of globalization and increasing ties between countries' economies. The impacts of fluctuations and crises in not-so-big economies may easily spread to other countries.

The most critical milestone for the global economy was the Global Crisis of 2008. The crisis affected every country in one way or another, and its after-effects are still being felt. Therefore, it is still changing and impacting global economic conditions.

Even though almost ten years have passed since the second large global economic crisis, it is still difficult to state that socioeconomic figures have returned to pre-crisis levels. This is a remarkable situation especially in the economies of emerging countries. Although emerging countries recovered quickly from the crisis, we see fluctuations in these economies in the last few years.

In this context, we observe that countries undergoing the different stages of the global crisis have changed their economic programs significantly. These countries continue to impose structurally contradictory economic policies in this process. The three biggest central banks, i.e., the Federal Reserve (the Fed), European Central Bank (ECB) and Bank of Japan (BoJ), affect and steer the global economy. Thus, policies by these banks give rise to implications that need to be followed closely by other economies as well.

Global financial markets followed a relatively calm course from the second half of 2016 to the US elections in parallel with the developments summarized above. In this period, Japan and the European Central Bank continued to implement an expansionary monetary policy boosting global liquidity. Although the markets received the referendum result in the UK negatively, its impact was short-lived.

International investors' moderate risk appetite supported portfolio inflows into emerging economies until the announcement of the US election results.[6]

As of 2017, increasing number of political decisions also began to impact global economic developments. This process is called the "Trump Impact." After the US presidential election, the uncertainty in the US financial markets abated in the first quarter of 2017. Stock prices rose as a result of the expansionary fiscal policy, higher infrastructure investments and expectations about the loosening of regulations regarding the financial system.

In this period, there is a continued expectation for the elimination of the uncertainties regarding the Fed's policies as well as the expansion of the monetary tightening to a longer period. The global market players expect the European Central Bank and the Bank of Japan to maintain low-interest rates. With higher growth forecasts for the global economy and somewhat lower monetary policy uncertainties, risk premiums have fallen, and financial markets have seen smaller volatilities. We observe an increase in risk appetite depending on these factors. The optimistic outlook of the global markets and anticipation

Global Economic Developments in the Post-crisis Period

Between 2013 and 2015

1. Developed Countries
- Low growth excluding US
- Decline in commodity prices
- Monetary Expansion in the EU and Japan

2. Developing Countries
- Relative decline in growth
- Foreign Trade Issues

Between 2015 and 2017

1. Developed Countries
- Brexit and EU Process
- Gradual growth period
- Increased Protectionism
- Trump Effect
- The Fed's Monetary Tightening Process

2. Developing Countries
- Decline in growth and fluctuations
- Export Issues
- More non-economic risks

Post 2017

1. Developed Countries
- Interest rate rise in the US due to inflation expectations
- Increasing fluctuation in financial markets
- Excessive volatility in the VIX-MOV Indices
- Expectations for a possible monetary tightening by ECB

2. Developing Countries
- The uptrend in commodity prices
- Inflation-interest rate pressure in some countries
- Geopolitical risks
- Positive global growth trend

6　　CBRT, "Financial Stability Report", November 2016, Issue: 23, p. 1

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of growth in emerging market economies affected the risk perceptions of these markets positively.[7]

Global economic growth and trade volume entered a recovery phase in 2017 and growth performance has been observed both in developed and developing countries. In addition to the optimistic outlook for consumer and real sector confidence indices, global economic activity follows a positive course thanks to favorable global financing conditions[8].

From 2018 we have observed serious fluctuations especially in the financial markets of the developed countries. The main reason for such higher volatility is the uptrend of US inflation and the expectation that the Fed will accelerate interest rate hike process. Using the post-2008 quantitative easing instrument quite effectively, the Fed thus wants to encourage consumption and investments. However, abundant money and its lower cost led to a surge in the stock market and lower bond interest rates. This enabled global risk indicators to follow a very low level, but as of 2018 financial decision-makers opined that the process would not be sustainable leading to significant volatility in developed stock markets. The decrease in fluctuations and risk appetite appears to have stabilized by February 2018.

Central banks have been the most decisive implementers of post-crisis economic policies. The decisions by effective and large Central Banks around the world have not only affected their own countries but also provided guidance to international fund movements. Both positive and negative results of this situation have affected mostly developing countries and their assets.

Significant Interactions among and Policy Trends of Key Central Banks in the Post-Global Crisis Period

The FED
Post-2013 Controlled Tightening
Anti-inflationary trend as of 2018

ECB
Still Loose, potential tightening in the second half of 2018

BOJ
Still Loose, potential tightening in 2019

Partial clarification of the normalization of the Fed's monetary policy in terms of downsizing and the completion of the election processes in some EU countries and the UK played a role in decreasing economic policy uncertainty. The recovery in global economic activity is not widespread but continues with support from the developing countries. The developing countries' growth rate in 2017 excluding China and India has surpassed that of developed countries for the first time since June 2014[9].

As of early 2018, there are downside risks for the coming period despite the current positive outlook in the global economy and financial conditions. The decision to implement tax reform in the US contributes to positive expectations regarding the US stock market. However, monetary tightening policy could be introduced faster than anticipated leading to an increase in US Treasury bond rates in the case of an increase in budget deficits due to such a policy[10].

Also, the positive atmosphere observed in financial markets may reverse if the pace and extent of the normalization process announced by the central banks of other developed countries go beyond what is anticipated. Moreover, high levels of private sector borrowing in some developing countries, particularly China, are considered as a factor that increases financial vulnerability.

It is a fact that the global growth risks remain in place for the coming period. The rise in global debt ratios and instabilities related to asset pricing are important points to note although the US and relatively EU economies have a vibrant outlook on a country basis.

On the other hand, uncertainties about global economic policies, growing protectionism trends and geopolitical risks continue to pose a downside risk to global growth performance in the coming period by limiting its growth potential. In this context, we should note that macroeconomic policies should be used effectively and in a coordinated way to reduce fragility. Also, they should be supported by structural reforms and appropriate trade policies[11].

If we analyze the world economy with a growth focus, we can refer to 2017 as the most positive year after the crisis period. In the post-2008 period, the developing countries made a recovery first and then the Developed Countries started to display dynamism. In 2017, both developing and developed countries achieved growth thanks to the economic measures taken.

The positive global economic growth performance in the first half of 2017 continued in the third quarter of the

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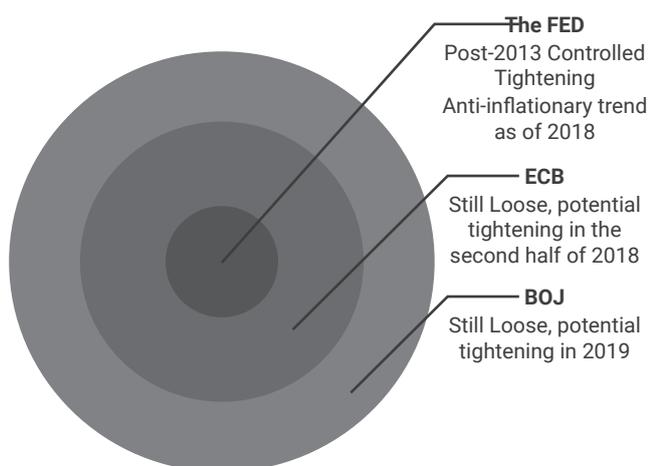
7   CBRT, "Financial Stability Report", May 2017, Issue: 24, p. 1
8   CBRT, "Inflation Report-Q1 2018", p.11
9   CBRT, "Financial Stability Report", November 2017, Issue: 25, p. 1
10   CBRT, "Inflation Report-Q1 2018", p.11
11   ibid. p. 11

year, both the developed and developing countries enabled the growth of the global economy to pick up speed compared to the previous period. Developed countries, particularly Eurozone and Japan, showed positive growth performance during this period[12].

The developing countries' growth rate in 2017 excluding China and India has surpassed that of developed countries for the first time since June 2014. Growing domestic demand in China and better-than-expected growth performance in the first half of the year supported global growth[13].

However, the slowdown in the UK's growth rate continued in the mentioned period. on the other hand, Latin America and Eastern Europe had higher growth rates as developing countries. Brazil's recovery became more pronounced as a Latin American country while rapid growth in the Turkish economy proved to be the most important factor that driving up the pace of growth in Eastern Europe. Despite the slowdown in China's growth rate, the growth rates of other Asian countries, particularly India, increased in this period. As a result, the Asian region experienced a growth rate in the third quarter that is equivalent to the previous period[14].

Despite heralding good news, the global stronger growth trend poses different problems for each country. For example, growth-related increase in commodity demand brought about price increases. This situation influenced commodity-selling countries positively whereas influencing raw material consuming ones adversely.

Global Growth (Annual Percentage Change)
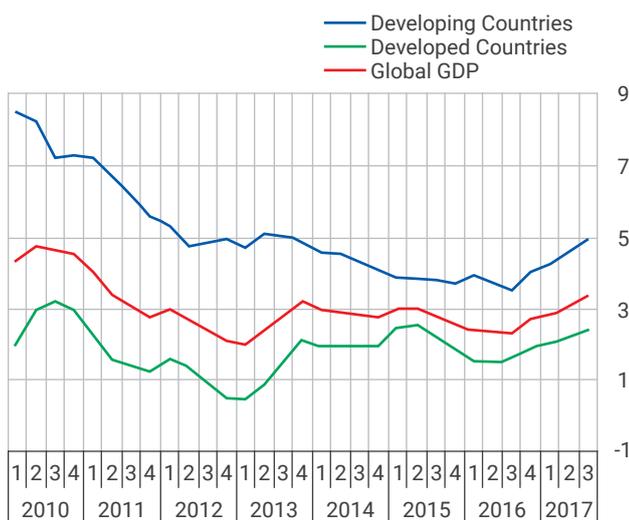
Source: Bloomberg, CBRT

The International Monetary Fund (IMF)[15]released an update of the "World Economic Outlook" report in January 2018. The IMF emphasized expectations for the global economy took a positive turn although certain risks should be noted. Accordingly, the organization revised its growth projections for the global economy 2017 and 2018 (3.7% and 3.9% respectively), stated it as 2.3% for the developed economies while sticking to its 2019 projection of 2.2%. It also raised its growth expectations and projections for the developing countries from an estimated rate of 4.7% for end-2017 to 4.9% in 2018 and to 5% in 2019.

The IMF's January 2018 update showed that it had more optimistic predictions than the October 2017 forecast. Raising its growth forecasts for developed economies other than Spain and the United Kingdom, the IMF remarkably made upside revisions for the US economic growth. It was stated in the executive summary that the revisions reflected the growing global growth momentum and the change in US tax policy. The IMF also predicted that the performance of Turkey and Poland as developing European countries might exceed forecasts in the coming period[16].

IMF's Growth Projections (as of January 2018)

World Economy Is Gaining Speed		
Estimate - Projections		
2017	2018	2019
World Output	3.7	3.9	3.9
Advance Economies	2.3	2.3	2.2
Developing Economies	4.7	4.9	5.0
Estimate - Projections		
2017	2018	2019
United States	2.3	2.7	2.5
Euro Area	2.4	2.2	2.0
Japan	1.8	1.2	0.9
United Kingdom	1.7	1.5	1.5
Brazil	1.1	1.9	2.1
China	6.8	6.6	6.4
India	6.7	7.4	7.8
Russia	1.8	1.7	1.5
Nigeria	0.8	2.1	1.9
South Africa	0.9	0.9	0.9

Source: IMF

The risks expressed by the IMF can be grouped into four main categories.

- Volatility-Correction to be Experienced in Financial Markets
- Growth Policies
- Economic Protection-Withdrawal
- Non-Economic Risks

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12   ibid, p.12
13   CBRT, "Financial Stability Report", November 2017, Issue: 25, p. 4
14   CBRT 'Inflation Report-2018-I, p. 12
15   IMF,'http://www.imf.org/en/publications/weo/issues/2018/01/11/world-economic-outlook-update-january-2018', January 2018
16   Isbank, "World and Turkish Economi", February 2018, Istanbul, p. 1

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Different risk factors have been emerging in the global economy over the years. Since 2008, priorities and associated risk perceptions have focused mostly on reviving economic growth, but the following risk factors have come to the fore in the past few years.

Global Risks

FINANCIAL MARKET CORRECTION
- Triggered by tighter U.S. monetary policy in response to inflation
- Buildup of financial vulnerabilities

INWARD-LOOKING POLICIES
- Increased regulatory/trade barriers

INVESTMENT GROWTH
- Lower-than-expected impact from U.S. tax policy changes
- Policyuncertainties

NONECONOMIC FACTORS
- Geopolitical tensions
- Political uncertainty
- Reform implementation risks extreme weather and climate events

Source: IMF

In sum, it is estimated that the global economy continued to grow both in developed and developing countries in the last quarter of last year and that the global growth rate will be above the previous quarter's value. This situation indicates that Turkey's external demand outlook for 2017 has a more positive trend compared to 2016. The consensus forecasts bulletin for January revised its global growth forecast for 2018 upwards compared to 2017 due to developed countries. Therefore, the positive performance in Turkey's foreign trade in 2017 is expected to continue in 2018[17].

Global Growth Forecasts, 2017 and 2018
(Annual average, Percentage Change)

	October	January
Developed Countries		
US	2,0	2,1
Eurozone	1,3	1,4
Germany	1,6	1,7
France	1,1	1,3
Italy	1,2	1,1
Spain	1,3	1,5
Greece*	1,0	0,9
United Kingdom	2,6	2,6
Japan	0,7	0,9
Developing Countries		
Asia Pacific	2,1	2,2
China	2,1	2,2
India**	4,6	4,7
Latin America	18,4	51,0
Latin America (excluding Venezuela)	-	5,7
Brasil*	4,0	4,1
Eastern Europe	4,8	5,1
Russia*	4,1	4,1

Source: Consensus Forecasts

Another variable that needs to be followed carefully in the global economy is the general level and direction of prices. Developing countries' post-crisis inflation increase target should be followed carefully along with the general level of prices, which is an increasingly structural problem for developing countries. Although they appear to be at an acceptable level for both groups of countries as of early 2017, inflationary pressures were seen in the figures of certain developing countries.

Global Inflation - CPI (Annual Percentage Change)
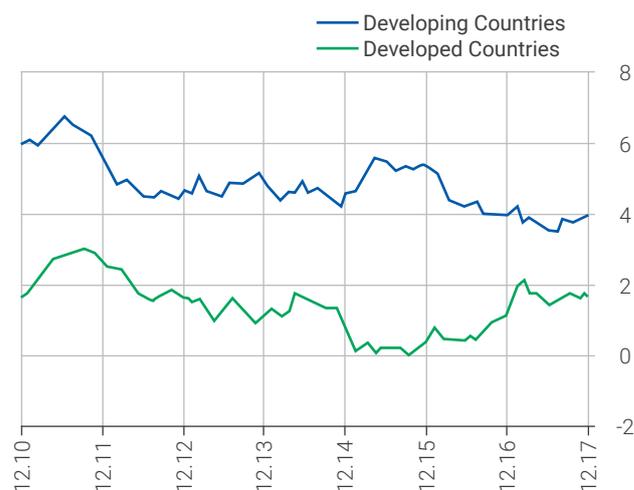
Source: TurkStat, BRSA, Latest Data: January 2018

Inflation rates displayed a limited decline in both developed and developing countries from early 2017 until the last quarter due to the developments mentioned above. In this period, core inflation rates remained flat in developed countries as opposed to a downtrend in the developing country group[18].

As of the last quarter of 2017, both demand and supply-side developments proved decisive on the upward movement of oil prices. In addition to the global economy's favorable growth performance, extreme colds in North America had a demand-related upward pressure on oil prices. On the production side, in addition to OPEC's decision to cut production, the ongoing geopolitical risks from the Middle East continue to exert upward pressure on oil prices by keeping concerns about oil supply alive. In particular, the price of Brent crude oil rose to $69 during the second week of January due to political developments in Iran. Based on the futures of Brent crude oil contracts, the price of crude oil is predicted to be around $67 at the end of 2018[19].

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17   CBRT "Inflation Report-2018-I", p. 13
18   CBRT, "Inflation Report, 2017-III", p.16
19   CBRT "Inflation Report-2018-I", p. 14

In the upcoming period, the main factors that could create an upward risk in terms of global inflation are considered to be the depreciation of the developing country currencies and possible increases in commodity prices, particularly oil, due to stronger economic activity and geopolitical risks if the normalization process of the Fed's and ECB's monetary policies take place faster than predicted.

Inflation Forecasts for 2018
(Annual Avg. % Change)

	October	January
Developed Countries		
US	2,0	2,1
Eurozone	1,3	1,4
Germany	1,6	1,7
France	1,1	1,3
Italy	1,2	1,1
Spain	1,3	1,5
Greece*	1,0	0,9
United Kingdom	2,6	2,6
Japan	0,7	0,9
Developing Countries		
Asia Pacific	2,1	2,2
China	2,1	2,2
India**	4,6	4,7
Latin America	18,4	51,0
Latin America (excluding Venezuela)	-	5,7
Brasil*	4,0	4,1
Eastern Europe	4,8	5,1
Russia*	4,1	4,1

Decisions were taken at the Fed and ECB meetings in December to maintain the existing policy stance. In line with the stimulating effect of the tax reform on growth and inflation and the Fed's messages in September, the interest rate hike for December was reflected in the expectations long before the meeting and did not have a remarkable impact on the markets. Also, median FOMC forecasts were maintained as three interest rate increases for 2018 and two interest rate increases for 2019. The policy rate hike implied by forwarding prices also seems to be consistent with the Fed forecasts. In this framework, the fact that the probability of four or more increases for 2018 is higher than 10% indicates that the tightening trend of the Fed is reflected in the pricing of the markets[20].

The Bank of England increased the interest rate by 25 basis points in November against rising inflation and weakening growth. It is estimated that the bank will need to tighten its monetary policy somewhat further in the next two-three years. The Bank of Japan, which maintains its stimulating monetary policy, has not signaled a tightening until recently. On the other hand, tightening continued in the monetary policies of other developed countries in line with the expectations of the central banks of Korea, Canada, and the Czech Republic increasing interest rates in October-Januaryr[21].

In summary, interest rate expectations and policy messages in developed countries point to a cautious and moderate normalization in monetary policy. However, financial markets, which are accustomed to cash abundance, can sometimes react quite strongly to interest increases. The correction in global capital markets in February 2018 and the sharp rise in 10-year US Treasury yields changed the risk criteria considerably. The occasional increase in volatility in the process is regarded as an important risk factor.

Risk Appetite (VIX Index)[22]
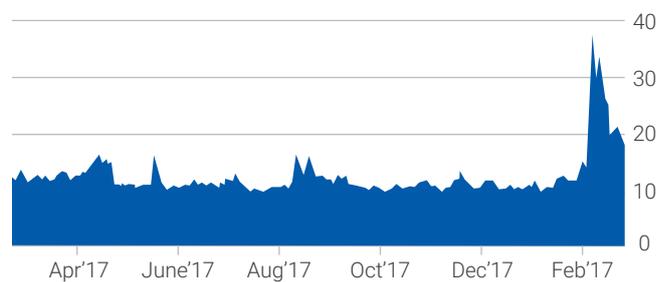
Source: Bloomberg, Latest Data: February 23, 2018

Despite the volatility in international markets in February, portfolio investments started to move towards developing countries.

Portfolio inflows continued for the country group in the last quarter of 2017 depending on the high level of global risk appetite and the positive growth performance in developing countries. Thus, the year 2017 saw strong and stable portfolio inflows into emerging markets. Both positive growth performance and the course of global risk appetite seem to let portfolio inflows follow a similar trend in 2018.[23]

1.2. Developments in the Turkish Economy

This part will analyze the developments in the Turkish economy in recent years as well as the evaluations and expectations first half of 2017. We should emphasize that we used a location and time-related method when analyzing economic developments.

The 2001 crisis became a milestone for the Turkish economy. The country had fallen into a deep crisis as a result of decades-long structural problems such as high inflation, unemployment, low growth, high interest and public debt. During a rapid recovery period,

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20   ibid. p.17
21   ibid. p.17
22   VIX Index: It is an index measuring fear levels in the markets. Using the S&P stock option prices, the VIX determines the expected volatility of the market-based on the relation of options prices with the market volatility.
23   ibid, p. 19

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the effects of the crisis were significantly removed in a relatively short time, thanks to the post-crisis legal regulations and administrative measures. Improvements were accomplished in debt management especially through public spending and a borrowing discipline, and the results were observed as growth and declining risk premiums. Then, different monetary and fiscal policies were applied to the changes taking place in the global and national economy.

One can make the following remarks after examining last one year of the Turkish economy;

- The growth rate of 3.2% in 2016 despite all kinds of developments which had the potential to adversely affect the course of the economy points to the dynamic structure of the Turkish economy.
- Domestically, leading indicators point to the ongoing recovery in general economic activity. The Turkish economy deserves praise with its fast recovery and eliminating the sort of risks that many countries would not have normally been able to overcome in 2016.
- On the other hand, 2017 has been a very successful year in terms of growth. The growth rate stood at 5.3% and 5.4% in the first and second quarters, respectively whereas the third quarter saw a record rate of 11.1%. Turkey's growth rate was 7.4% in the first nine months. Turkey is expected to complete the year with a growth rate of over 7%.
- According to TurkStat data, recovery in labor force indicators continued in October 2017. The seasonally adjusted unemployment rate saw its lowest level in 1.5 years with 10.3%.
- Budget indicators in overall 2017 showed a more positive performance than the expectations in the Medium Term Program announced in October. The budget deficit was 14.3 billion TL lower than the MTP forecast of 47.4 billion TL.
- The monthly increase in consumer prices in January came below market expectations at 1.02%. The year-on-year decline in CPIE continued in this period, too. In 2017, CPI stood at 11.92%.
- In line with the expectations, the CBRT did not make any changes to interest rates in its meeting on January 18, 2018, while strengthening its emphasis that it would maintain its tight monetary policy stance.
- The cross-border operation, which featured the agenda more from the second half of January, had a quite limited impact on the financial markets.
- The public debt is below the Maastricht[24] criteria as the country maintains its strict stance towards public finance.

- The government used fiscal policy tools effectively thanks to both Credit Guarantee Fund and budget resources. However, these activities should not be considered as moving away from fiscal discipline. The funds spent on such support schemes will return to the budget again after a while with the revival of growth and trade.
- The growth tendency in the global economy has positively affected the Turkish economy leading to higher export figures.

Perceptions that change fluctuations in the global economy have remarkable impacts on the Turkish economy. However, the decline in the Turkish Economy's chronic problems or a positive turn enhanced the economy's resilience against fluctuations. Turkey's general economic outlook and indicators are a much better state compared to those of many other countries. Much like the economies of similar risk groups, the Turkish economy is also affected by developing trends in the global economy. Proactive actions had to be taken using monetary, economic and fiscal policies in the face of fluctuations and changes, which occurred at different stages of the crisis, in global economies.[25]

1.2.1. Growth and National Income

Its success in sustainable growth is one of the biggest achievements of the Turkish economy. One of the most critical problems in the world is the insufficient growth of countries' economies.

Annual Growth Rates in Turkey (GDP)
(Chained Volume Index, 2009 =100, % Change)
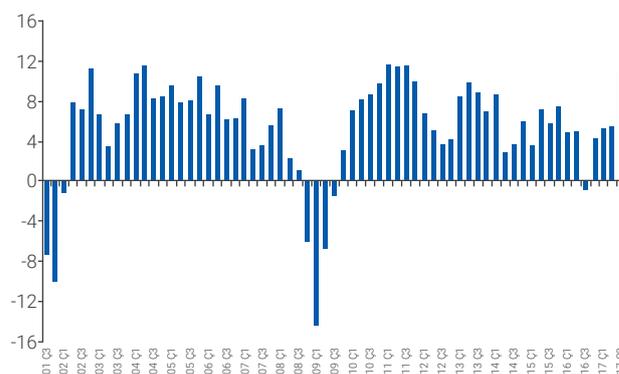
Source: TurkStat

"Growth at reasonable levels" has become the most important issue since 2008 global crisis. Turkey's position has been closely watched in this regard. Until the 2001 crisis, the Turkish economy had failed to record growth for four consecutive years. Then, it accomplished a great feat by achieving positive growth

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24   Considering the Maastricht Criteria stipulating that public debt should not exceed 60% of GDP, the national debt does not even exceed 30% of the GDP excluding private sector debt.
25   Emlak Konut, 2013 Annual Report- 2014, p.101

for six consecutive years, from 2002 to 2008. Following the 2008 global crisis, it registered negative growth only in 2009 and then managed to recover quickly in 2010.

An overview of the Turkish economy in recent years shows that it has achieved an average of 4.7% growth from 2002 to 2016. A striking figure is the Turkish economy's real growth rate from 2002 to year-end 2016. The economy achieved 71%-real growth throughout this period. This accomplishment becomes even more significant in the face of the sustainable growth problems in the rest of the world[26].

According to TurkStat's[27] production method, annual GDP as the accumulation of four seasons, increased by 3.2% in 2016 year-on-year in terms of the chained volume index. It stood at 7.4% in the first nine months of 2017.

TurkStat referred to the following points in the third quarter growth developments announced on [28]December 11, 2017;

- In the third quarter of 2017, the first estimate regarding the gross domestic product rose by 11.1% year on year in terms of chain volume index (2009=100).

- The production-based gross domestic product was estimated to rise by %24.2 to 827.23 billion TRY at current prices in the third quarter of 2017.

- Based on the activities comprising the gross domestic product, the total added value of the agricultural, industrial and construction sectors rose year-on-year by 2.8%, 14.8%, and 18.7%, respectively, as a volume index in the third quarter of 2017. On the other hand, the added value of the services sector, which comprises trade, transportation, accommodation, and food service activities, rose by 20.7%.

- The calendar-adjusted gross domestic product estimate rose by 9.6% in the third quarter of 2017 year-on-year in terms of chain volume index. Seasonally and calendar adjusted GDP chain volume index rose by 1.2% on a quarterly basis.

The following are the remarkable issues related to growth in the third quarter of 2017[29];

- According to the chained volume index, the Turkish economy showed the strongest performance in the last six years by growing above expectations with 11.1% in the third quarter of the year compared to the same period last year. This data reflects the low base effect as well as the revitaliza-

tion of domestic consumption and investment with the support of the measures taken by the public sector. The Turkish economy had shrunk by 0.8% in the same period of 2016.

Contribution to the GDP through the Production Method

Growth in Q3
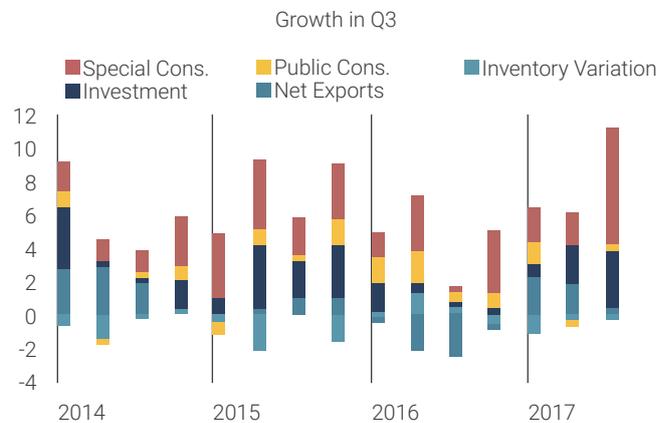
Source: TurkStat, Isbank

- TurkStat revised its announcements of 5.2% and 5.1% for the first and second quarter growth rates to 5.3% and 5.4%, respectively. Thus, growth stood at 7.4% in the first three quarters of the year.

- If we examine GDP by expenditure method, we see that private consumption expenditures item makes the highest contribution to growth in the third quarter with 7 percentage points. 31% increase in household spending on durable consumption goods stood out with the demand increasing earlier with tax deductions ending in the last quarter of the year and due to low base effect. Public consumption expenditures contributed to growth in this period in a very limited manner.

- Investment spending made the second highest contribution to growth after private consumption expenditures with 3.6 percentage points in the third quarter. Declining in the last four quarters on an annual basis, the machinery and equipment investments followed a positive course in the third quarter of the year. Machinery and equipment investments played a major role in higher investments expanding by 15.3% annually according to the chained volume index. This is consistent with the rise in capacity utilization rates. Construction investments continued to support the growth considerably in this period.

- Analysis of the GDP data according to the production method shows that services and manufactur-

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26   According to TurkStat and Ministry of Economy data
27   TurkStat; "Press Release-GSYH 2016" Issue: 24566, March 31, 2017
28   TurkStat, "Periodical Gross Domestic Product," 4th Quarter: July - September, 2017, Issue: Issue: 24569.11 December 2017
29   Isbank, "Economic Growth 1th Quarter", June 12, 2017, p. 2

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ing sectors drew growth considerably. The services sector contributed 5.7 points to growth thanks to the recovery in tourism, whereas the industrial sector made the highest contribution in 6 years with 2.6 points. According to the data for the first nine months of the year, services and industrial sectors added 5.9 points to the GDP growth of 7.4%. The contribution from the construction and agriculture sectors was 0.8 and 0.2 points, respectively.

Change in Gross Domestic Product (2016-2017)

Year	Quarter	GDP, Current Prices, million TL	GDP, Current Prices, bn $	GDP Chain Volume Index (2009=100)	GDP Change Ratio (%)
2016	I	563.891	191.396	140,1	4,8
	II	631.233	217.634	155,7	4,9
	III	666.176	225.232	161,8	-0,8
	IV	747.226	228.482	173,4	4,2
	Annual	**2.608.526**	**862.744**	**157,8**	**3,2**
2017	I	649.481	175.918	147,5	5,3
	II	735.543	205.175	164,2	5,4
	III	827.230	234.550	179,7	11,1
	IV	889.231	234.451	185,9	7,3
	Annual	**3.104.907**	**851.046**	**169.5**	**7.4**

Source: TurkStat

2017 growth figures announced after the report was prepared to show the following;

• According to the production method, annual GDP as the accumulation of four seasons rose by 7.4% year-on-year in 2017 in terms of the chained volume index (2009=100).

• According to the production method, GDP recorded 19% year-on-year increase in current prices in 2017 reaching 3,104,907,000 TRY.

• An examination of the activities forming the gross domestic product in 2017 shows that the added value of the agricultural, industrial and construction sectors rose year-on-year by 4.7%, 9.2%, and 8.9%, respectively in terms of volume index. The added value of the services sector, which comprises trade, transportation, accommodation, and food service activities, rose by 10.7%.

• In 2017, GDP per capita was calculated as 38,660 TRY at current prices and as $10,597 in terms of US dollars.

The growth process does not only depend on internal economic developments. There can be positive or adverse effects based on the world economy and risk variables. Many systematic risk factors can affect growth such as the duration needed by the Fed and other major central banks to downsize their balance sheets and raise money costs as well as commodity prices, geopolitical developments, and external relations.

Turkey Growth Rate (2011-2017)

Turkish Economy Closed 2017 With 7.3% Growth
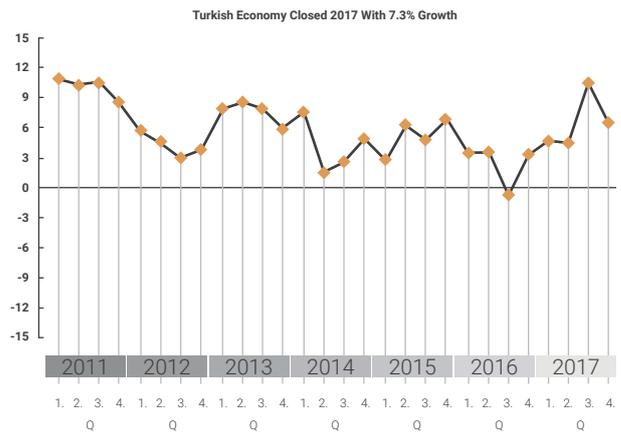
Source: TurkStat, AA

The growth process does not only depend on internal economic developments. There can be positive or adverse effects based on the world economy and risk variables. Many systematic risk factors can affect growth such as the duration needed by the Fed and other major central banks to downsize their balance sheets and raise money costs as well as commodity prices, geopolitical developments, and external relations.

A global analysis would make the Turkish economy's growth rates look quite remarkable. Growth appears as one of Turkey's most economically important achievements. Over the last decade, it increased GDP the most as a percentage change from 2007 to 2017 among the members of the Organization for Economic Cooperation (OECD).

GDP Growth Rate among OECD Countries (2007-Q4 2007)

The countries as Italy, Greece, Finland and Portugal do not reach the GDP growth levels pre-2008 global crises.
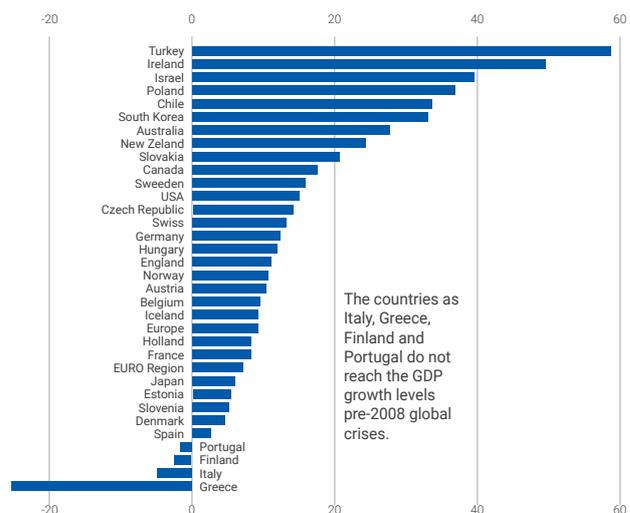
Source: OECD data, Graph: FT

We can see a similar process in the world's twenty largest economies. Turkey has become the fastest growing G-20 country in 2017.

Growth Rates of G-20 Countries (2017)

Source: TurkStat, OECD

Published in March 2018, the OECD's[30] "Interim Economic Outlook Report" also made revisions to its growth forecasts regarding the global and Turkish economy. In contrast to the previous report, Turkey's growth forecast was upgraded from 6.1% to 6.9% for last year, from 4.9% to 5.3% to for 2018, and from 4.7% to 5.1% for 2018.

The report stated that the strong increase in domestic demand would support growth in the coming period with the growth appearing as around 5% in the coming years with a lower number of incentives. The report pointed to this growth rate as the strongest one since 2011 stating that industrial production, investment, and commerce improved with higher business and consumer confidence. The report noted that strong growth accompanied new jobs with the unemployment rate falling to pre-crisis levels across the OECD. However, no significant progress was made in youth unemployment despite an increase in the employment rate of the population aged 55 and older.

With a similar improvement, the IMF[31] revised the growth forecast upward for Turkey in the "Gross Domestic Product Growth" in its report "Global Prospects and Policy Challenges."

Accordingly, the organization expects Turkey to grow 4.3% both this year and next year. These expectations were announced as 3.5% in the previous WEO report published in October 2017. In addition, the report raised its 2017 growth forecast for Turkey from 5.1% to 6.3%.

However, although foreign institutions revise their growth forecasts in the upward direction 2017 growth rate is expected to exceed 7% The growth rate achieved in 2017 means a record value in global terms. The measures and incentives to stimulate the economy played an important role in this process. The growth trend is expected to continue in 2018. However, the growth rate may slow down slightly compared to 2017. We see important achievements

in terms of growth. Sustainable growth has gained importance after this stage.

1.2.2. Developments in General Price Levels

One of the most critical structural problems in emerging economies is the increase in general level of prices. Turkey reduced inflationary pressure considerably with the measures taken after 2001 setting an example in this respect. Managing to bring down the average inflation in the 1995-2001 period from 71.6[32]% to 10% shows the impact of such measures. Although Turkey occasionally got close to the CBRT's annual inflation target of 5% since 2002, the results generally turned out to be higher.

Average Inflation in Turkey (%)
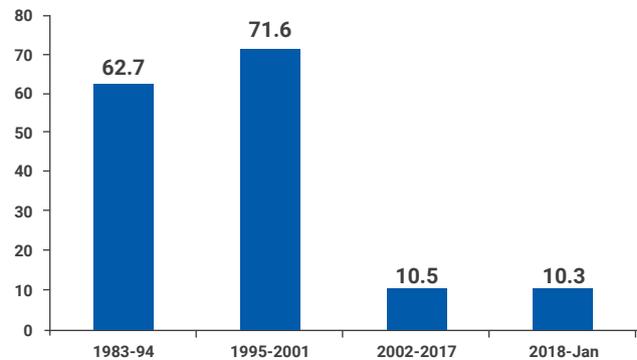
Source: TurkStat

Even though the rise in general price levels (one of the critical structural problems of our country) is now largely under control, the inflation may show increases in relation to the internal and external developments. In 2017, annual inflation stood at 11.9% a level higher than the targeted value. The main reasons for the rise in inflation this year included the rise in basic food prices, the cost increase resulting from the appreciation of foreign currencies, and the influence of the recovery in commodity prices around the world.

**Changes in CPI (Consumer Prices) and
D-PPI (Producer Prices)**
(Years 2016 and 2017)

Change (%)	CPI		D-PPI	
	2016	**2017**	**2016**	**2017**
Monthly	1,64	0,69	2,98	1,37
Annual	8,53	11,92	9,94	15,47
Annual Average	7.78	11,14	4,30	15,82

Source: TurkStat

30   https://www.bloomberght.com/haberler/haber/2102883-oecd-turkiye-nin-buyume-tahminini-yukseltti,13. March 2018, p.1
31   https://www.bloomberght.com/haberler/haber/2103738-imf-turkiye-nin-buyume-beklentisini-yukseltti, March15, 2018, p.1
32   According to TurkStat data

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The D-PPI's rate of increase still follows a high course despite slowing down slightly in December 2017. This performance is influenced by the annual increase in prices in all subgroups comprising the index. Increased input costs, especially in the manufacture of food products and the rise in commodity prices, have been pushing up the index. In terms of the annual changes, the strongest increase in December was in the crude oil and natural gas group with 71%, and it was followed by the basic metals with 36% increase[33].

In summary, the inflation outlook deteriorated in the last quarter as a result of cost pressures resulting from rising exchange rates and higher commodity prices. In particular, further cumulative depreciation of the Turkish lira in this period appeared as the main factor negatively affecting the outlook. The strong course of economic activity also played a role in cost pressures on inflation.

High inflation level had a negative impact on the sub-items for which there is a strong retrospective indexing mechanism. On the other hand, inflationary effects resulting from the tax hike in 2017 were observed to remain significantly below the past years limiting a more negative inflation outlook. The high levels of inflation and cost developments keep risks to expectations and pricing behavior alive[34].

In January 2018, CPI remained below market expectations and rose by 1.02% on a monthly basis. According to the Reuters poll, CPI was estimated to rise by 1.28% on a monthly basis. on the other hand, monthly D-PPI increases came as 0.99%.

CPI-based annual inflation growth declined to 10.35% in parallel with the high base effect and expectations. In the first month of 2018, the annual increase in D-PPI slowed considerably compared to December reaching the lowest level in more than one year with 12.14%.

Annual Inflation (January 2018)
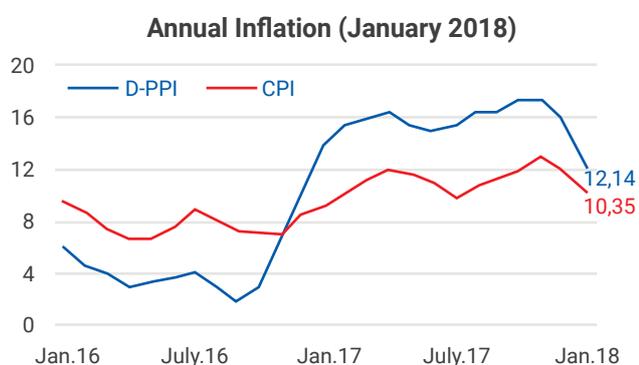
Source: TurkStat

The fourth quarter of 2017, inflation expectations saw a slight deterioration due to cost shocks and general inflation outlook. As of January 2018, inflation expectations for the next 12 and 24 months maintained high levels at 9.24% and 8.23%, respectively[35].

As in 2017, the developments in TL and the movements in food and oil prices can be expected to determine the course of inflation in the period ahead.

CBRT gradually strengthened monetary tightening throughout 2017 to limit the deterioration in the inflation outlook. In this context, the CBRT raised its overnight lending interest rate at the PPI meeting in January 2017 from 8.5% to 9.25% and the lending interest rate under the GLP practice from 10% to 11%. The CBRT also took certain liquidity measures to eliminate the negative effects of excessive volatility in the exchange market at the beginning of the year on price stability and financial stability. Accordingly, it did not invite a one-week repo auction open as of January 12 while gradually increasing the share of GLP in the CBRT funding. In addition, certain measures were taken to provide flexibility in the management of foreign exchange liquidity. For this purpose, foreign currency required reserve ratios were reduced, a TRY-based swap market was opened, and rediscount credits were allowed to be repaid in TRY[36].

We may expect the CBRT to pursue price stability which has been already set as a priority. The Central Bank emphasized that necessary measures would be taken stating that it would use monetary policy instruments to prevent inflation. On the other hand, it is remarkable that the US is beginning to take reflationary measures (applying a stricter monetary policy to prevent inflation) even though inflation expectations are currently low in the world.

1.2.3. Developments Regarding Balance of Payments

The government took measures to curb the current account deficit, one of the Turkish economy's tender spots, and improvements started to take effect. A relative decrease was observed in sensitivity to external resource inflows/outflows and foreign currency, which rise due to the current account deficit. From 2013 onwards, measures have been taken to reduce the current account deficit amount and composition through fiscal and monetary policies. In this process, declining energy inputs increased recovery in current account deficit.

However, the current account deficit increased more than expected with increased systemic risks in 2016. On the other hand, raw material and energy prices rising in parallel with the recovery in the world economy also contributed to this process.

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33   Isbank, "Inflation Developments-December 2017", January 3, 2018, p. 1
34   CBRT "Inflation Report-2018-I", p. 26
35   ibid, p. 35
36   ibid, p. 62

The current account deficit was $7.7 billion in December 2017 rising by 42.1% year on year to $47.1 billion. In this period, $12 billion out of $14-billion-expansion in the current account resulted from net gold imports. 25% year-on-year increase in the price of Brent crude oil also put upward pressure on the current account deficit. It is important to note that the current account deficit falls to $4.3 billion excluding net energy and gold trade.

imports is expected to be higher than that of exports due to the imports' relatively stronger base effect leading the net exports to limit annual growth."

Another point to be considered Turkey's foreign trade transactions is that exports are shaped depending on imports. This dependence is especially high in terms of raw material and energy input.

Current Accounts and Finance Account (Net 12-Month, Billion $)
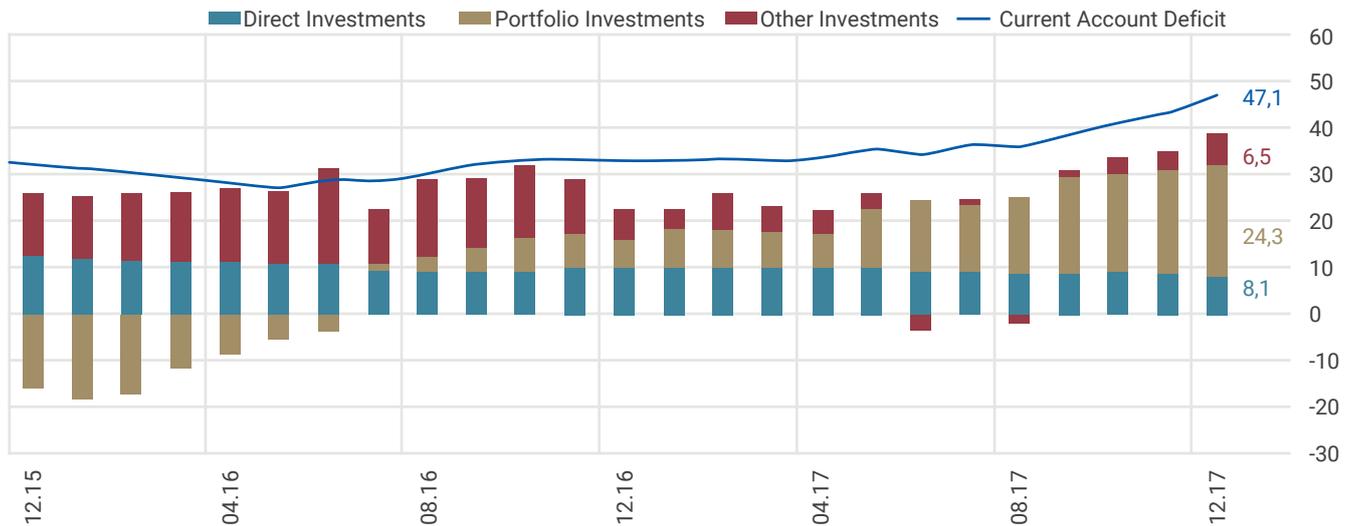
Source: CBRT

One of the most important factors affecting the current account balance favorably in 2017 is the increase in tourism revenues. Rising in parallel with a higher number of tourists coming from Russia in 2017, tourism revenues limited the expansion of the current account deficit.

The domestic demand strengthened in 2017 compared with 2016, and external demand followed an EU-based recovery trend despite the current geopolitical risks. This trend in the EU, Turkey's most important trading partner, is also reflected in Turkey's foreign trade figures.

CBRT[37] said "Non-gold quantity indices which show the main trend of foreign trade in a more healthy fashion indicated a loss of momentum in imports of goods in the last quarter, whereas exports of goods preserved their strength. Exports are supported by the recovery trend observed on a global scale and especially in the European Union, the course of the real exchange rate and market diversification flexibility in international markets. The recovery in tourism contributes, in turn, to the increase in service exports. As a result, net exports are expected to make a positive contribution to the quarterly growth due to the slowing imports and rising exports in the last quarter of the year. However, the annual rate of increase in

External Trade (Annual % Change)

Source: TurkStat, Isbank

The financing of the current account and its related resources are crucial for developing countries such as Turkey. In addition to the implementation of medium-term solutions (i.e., increasing the exports by making them more value-added), the current account deficit needs to be financed in the near future. Apart from the advantages related to its location, Turkey is in an attractive country for foreign investors with its economic performance and potential.

As of late 2017, the following issues were highlighted in the financing of the current account deficit;

- In 2017, net direct investments declined by 20.3% year-on-year to $8.1 billion. Following a weak

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37   ibid, pp. 46-47

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course throughout the year, almost half of direct investments originated from the net real estate item.

- Portfolio investments played an important role in financing the current account deficit in 2017. Rising rapidly compared to 2016, portfolio investments surged by 285.6% to $24.3 billion in 2017. Capital inflows to the bond market were decisive in this development.

- In the relevant period, $6.6 billion originated from the bonds issued by banks abroad, $5.8 billion from the general issuance by the government abroad, and $7.3 billion as net foreign capital inflows to the government debt security market. The stock market saw a capital inflow of $3.2 billion.

Net Portfolio Investments (2011-2017)
(January-December period, $ bn USD)
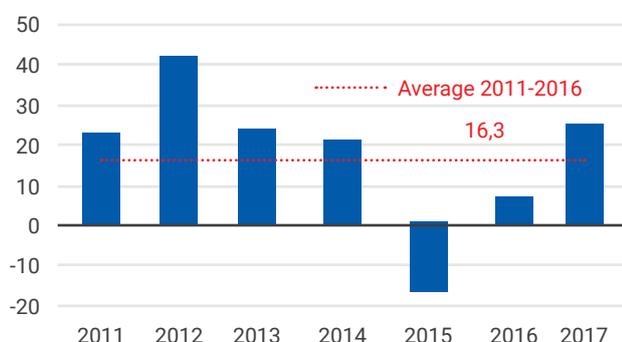
Source: CBRT, Isbank

A controlled growth strategy has been adopted, and both monetary and financial policies have been implemented particularly since 2013 to mitigate problems caused by the current account deficit (foreign financing, susceptibility to capital movements, foreign exchange rates, etc.). A more moderate growth outlook has been observed during this period.

However, the CBRT has adopted a monetary policy since mid-2015 considering growth as a priority while monitoring price stability simultaneously. Adopting a stricter monetary policy from late 2016 onwards, the CBRT ensured a more stable foreign exchange and financial market with its interest rate moves and by tightening the amount of money in circulation.

The financing of the current account and its related resources are crucial for developing countries such as Turkey. In addition to the implementation of medium-term solutions (i.e., increasing the exports by making them more value-added), the current account deficit needs to be financed in the near future. Apart from the advantages related to its location, Turkey is in an attractive country for foreign investors with its economic performance and potential.

The Turkish economy ensures resources from abroad with its dynamics and potential. We should not ignore

the transfer of foreign funds to the Turkish economy even after July 15, 2016, when the risk perception of the national economy increased significantly. The cumulative direct investment amount reached $8.1 billion in December 2017. In the same period, the amount of funds entering money and capital markets as portfolio investments equaled $24.2 billion.

Capital Entries and Distribution (December 2017)
(Net Capital Inflow to Turkey)

	($ Million)		Distribution of Capital Inflows (%)	
	2016	**2017**	**2016**	**2017**
Current Accoun Balance	-33.137	-47.100	-	-
FDI Inflow	33.950	38.893	100,0	100,0
- Direct Investments	10.196	8.128	30,0	20,9
- Portfolio Investments	6.300	24.292	18,6	62,5
- Other Investments	6.462	6.472	19,0	16,6
- Net Errors and Omissions	10.969	-16	32,3	0,0
- Other	23	17	0,1	0,0
Reserves[1]	-813	8.207	-	-

Note: Figures may not be providing the sum due to rounding.

Source: CBRT, Isbank

In addition to the above details, $4.6 billion capital inflows entered our country in 2017 thanks to real estate sales to foreign investors. The construction industry makes a considerable contribution regarding the balance of payments and current account deficit.

1.2.4. Employment Developments

Creating more jobs and decreasing the unemployment rate are among the most critical issues faced throughout the world. In a number of Western countries, along with growth, employment-related problems stand as the major issue in the post-crisis period. Our country appears to have made significant gains in unemployment through employment incentive policies.

Still, there may be differentiation in unemployment levels, depending on growth rate fluctuations and future projections. Changes in global monetary and economic policies may lead to consequences in employment levels as they impact the national growth rates.

We should note that Turkey has quite a young population which has a consequent increase in the labor force participation. In addition to the increase in employment, the rising participation rate limits the decrease in unemployment rates. It is anticipated that stable growth will continue to lead to higher investments that will increase employment opportunities and gradual declines in unemployment rates.

Unemployment Rates (Seasonally Adjusted %)
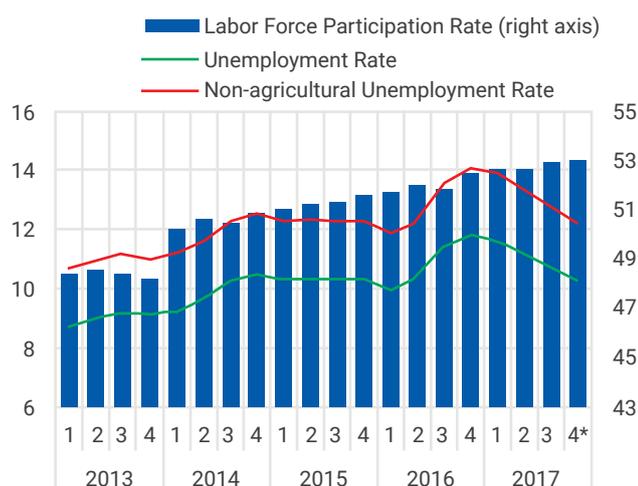
*Source: TurkStat/*October Period*

Developments related to Labor Force, Employment, and Unemployment
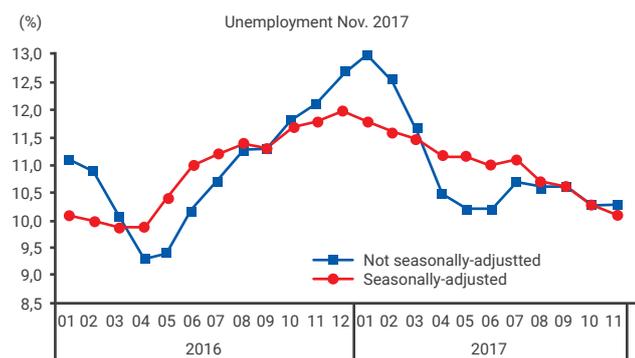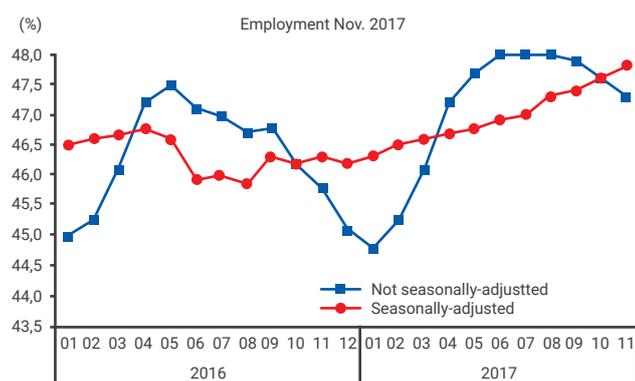
Source: TurkStat

According to TurkStat data[38];

- The number of the unemployed among those aged 15 and older demonstrated a year-on-year decrease of 440,000 people totaling 3,275,000 in November 2017. The unemployment rate was 10.3% with a 1.8 percentage point decline. In the

same period, the non-agricultural unemployment rate was estimated to be 12.2% with a decrease of 2.1 percentage point. The unemployment rate in the young population (15-24 years old) was 19.3% with a 3.3-percentage point decrease while this rate in the 15-64 age group was 10.5% with 1.8 percentage point decrease.

- The number of employed people rose by 1,448,000 year-on-year to 28,515,000 in November 2017 leading to an employment rate of 47.3% with a 1.5 percentage point increase.

- In this period, the number of agriculture and non-agricultural sector employees rose by 244,000 and 1,205,000, respectively. 18.6%, 19.2%, 7.6% and 54.6% of the employees served in the agriculture, industrial, construction and services sectors, respectively. The share of the agricultural and industrial sector employees declined year on year by 0.1 percentage point, whereas the share of the construction and service sector employees rose by 0.2 and 0.4 percentage points, respectively.

- Labor force rose by 1,009,000 year-on-year to 31,790,000 in November 2017 leading to a participation rate of 52.8% with a 0.7-point increase. Based on the comparisons for the same period, labor force participation rate rose to 72.1% and 33.8% in men and women, respectively, with a 0.2-point and 1.1-point increase.

- Seasonally adjusted employment was estimated to be 28,780,000 with the addition of 143,000 jobs compared to the previous period. The employment rate stood at 47.8% with a 0.2 percentage point increase.

- The seasonally adjusted unemployment figure stood at 3,243,000 with a decline of 30,000 individuals. The unemployment rate stood at 10.1% with a 0.2 percentage point increase.

- The seasonally adjusted labor force participation rate rose to 53.2% with a 0.1-point increase over the previous period. According to economic activity, the number of people employed rose by 21,000 in agriculture, 35,000 in construction and 87,000 in service sectors.

The significant improvement of the Turkish economy from 2002 to 2017 also shows itself in the growth indicators of employment and labor force participation rate. The Turkish economy had significant achievements in employment since the 2001 crisis and increased the employment rate considerably, reaching a better position than many countries. However, as stated in the above sections, employment figures may experience annual, seasonal and cyclical increases and decreases.

38 TurkStat, "Labor Force Statistics-November 2017" Issue: 27687, February 15, 2018

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Following are the most important elements that affect employment in the last year;

- Turkey's young workforce thanks to its demographic characteristics,

- The impact of heavy external migration on the labor market,

- The decrease in export opportunities in parallel with the global economic developments,

- Internal economic expectations,

- The increase in production costs and their influence on employment,

- The effects of relations with neighboring countries on employment in the trade and tourism industries,

- The developments in our country and their effect on employment,

- Construction and industrial services remain to be important employment centers supported by the services industry.

However, the Turkish economy has the capacity to achieve, despite any possible development, a recovery in the labor market in 2017 and onwards with its own dynamics.

Thanks to employment incentives and campaigns, additional employment was provided to 1.5 million people in 2017[39].

Lastly, social security contributions will be granted in accordance with the omnibus bill brought to the TGNA General Assembly in March 2018, and employers will benefit from income tax withholding and stamp tax incentives;

- This grant, called "a month by you, another month by me," is designed for enterprises mostly considered as SMEs operating in the manufacturing industry with one to three employees,

- First applied in 2016 to reduce the burden of an increase in the minimum wage to the employer, monthly 100 TL support continued in 2017. The same support will continue in 2018,

An important gain will be made for the unemployment problem with such measures and the effect of economic growth on the employment market. We should also remember that more long-lasting solutions will be achieved with the activities regarding education, value-added production, industrial sector's adaptation to Industry 4.0 in the medium term.

1.2.5. Variables of the Turkish Economy at A Glance
- Growth -

Constributions to GDP Growth
Growth in Q3 %11,1

GDP
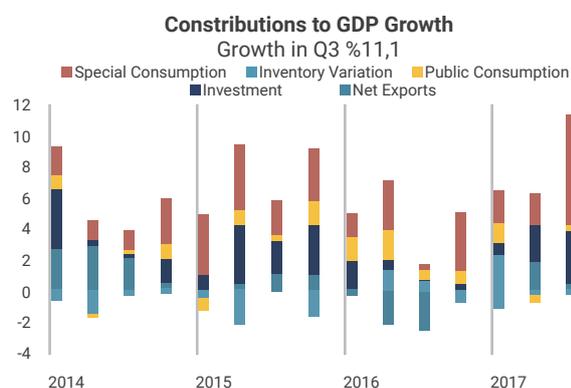
Source: TurkStat, Isbank
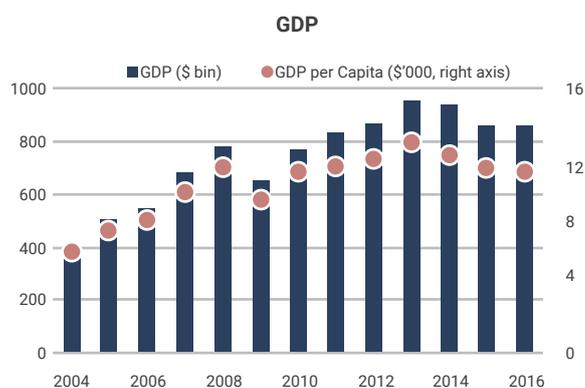
Growth	2012	2013	2014	2015	2016		17-Q1	17-Q2	17-Q3
GDP ($ bn)	871	950	935	861	863		176	205	235
GDP (bn TRY)	1.810	2.045	2.339	2.609	3.040		649	736	827
Growth Rate (%)	4,8	8,5	5,2	6,1	3,2		5,3	5,4	11,1

Source: TurkStat

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39   The employment campaign initiated by President Recep Tayyip Erdoğan in February 2017 includes significant incentives and affects the labor market positively. For details, please see http://www.istihdamseferberligi.net/.

- Inflation -

Monthly Inflation (%)
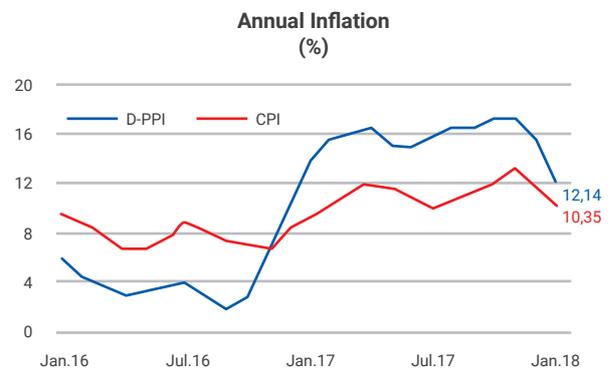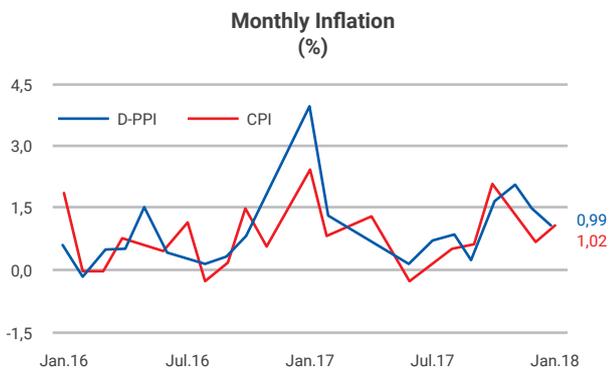
Source: TurkStat, Isbank, Datastream

Inflation (%)						Nov.17	Dec.17	Jan.17
CPI (Annual)	6,16	7,40	8,17	8,81	8,53	12,98	11,92	10,35
Domestic PPI (Annual)	2,45	6,97	6,36	5,71	9,94	17,30	15,47	12,14

Source: TurkStat

- Employment (Seasonally Adjusted) -

Labor Force Indicators (seasonally-adjusted)

Employment (seasonally-adjusted, mn people)
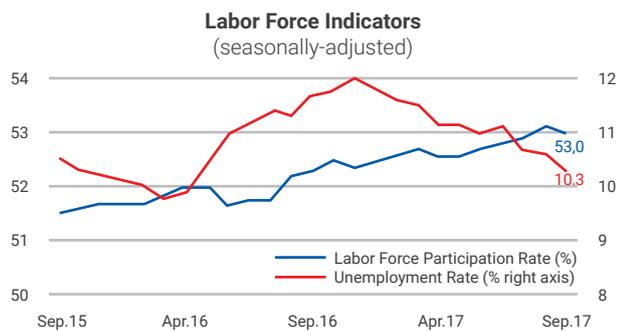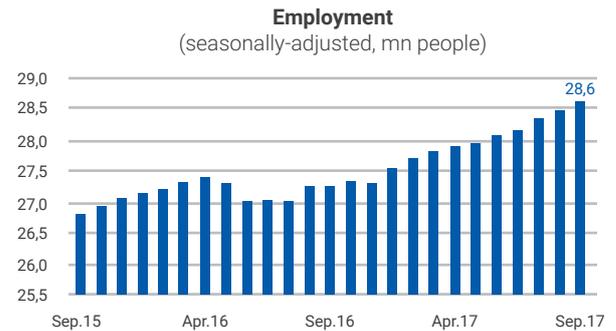
Source: TurkStat

Seasonally-Adjusted Labor Force Market Data						Dec.17	Sep.17	Oct.17
Unemployment Rate (%)	8,8	9,1	10,3	10,2	12,0	10,7	10,6	10,3
Labor Force Participation Rate (%)	48,5	48,5	51,0	51,7	52,4	52,9	53,1	53,0

Source: TurkStat

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- Risk Indicators[40] -
EMBI

Legend: (EMBI + TURKEY) - (EMBI+) | EMBI + TURKEY | EMBI +
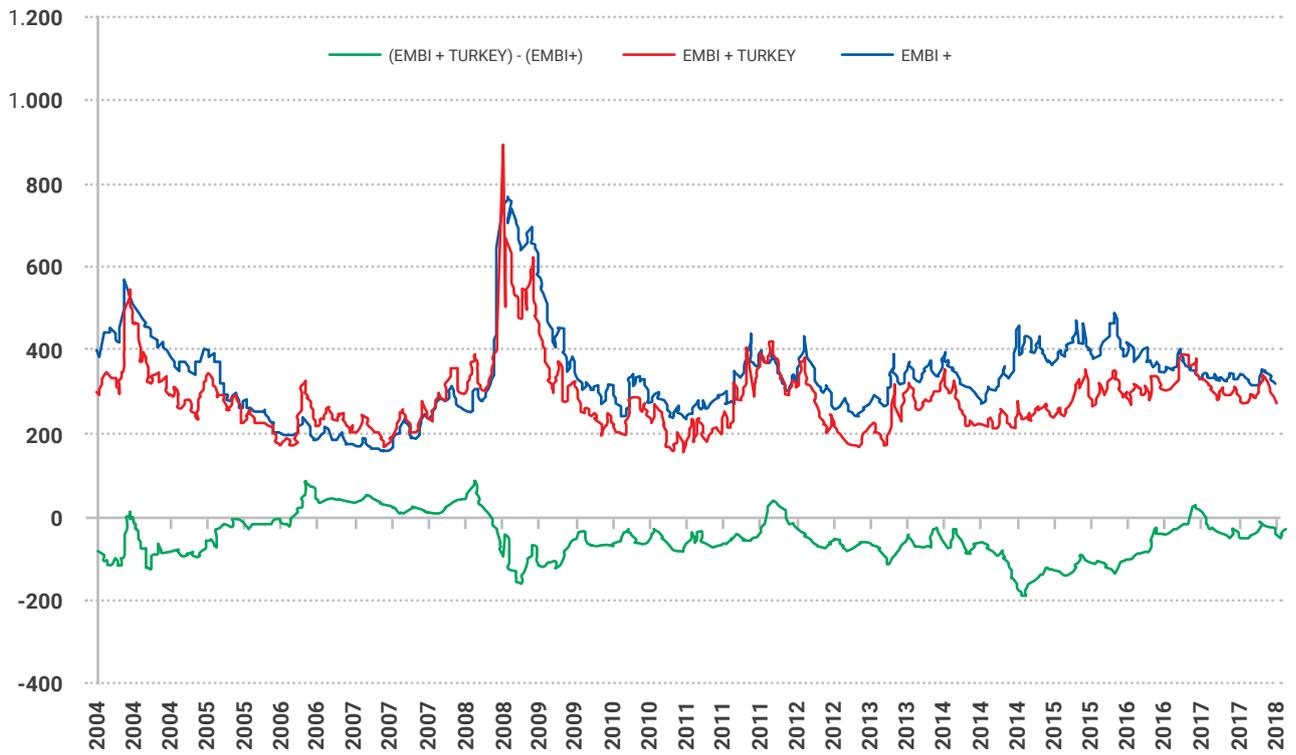
Source: JP Morgan

CDS
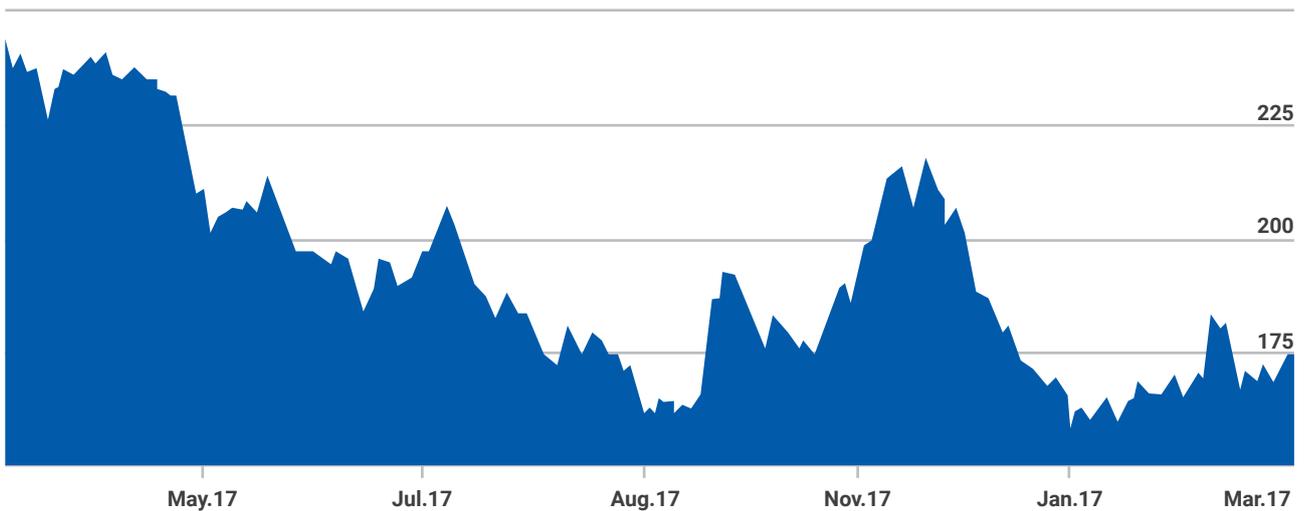
Source: Bloomberg

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40   EMBI+Index: (Emerging Markets Bond Index)
      Published by JP Morgan, the index monitors the bond issuance of emerging markets in foreign currencies.
      Merrill Option Volatility Expectations Index A volatility expectation index developed by the investment bank Merrill Lynch.
      CDS: Credit Default Swap

- The balance of Trade and Payments -

Foreign Trade
(Annual % Change)

Current Account
($ bn)
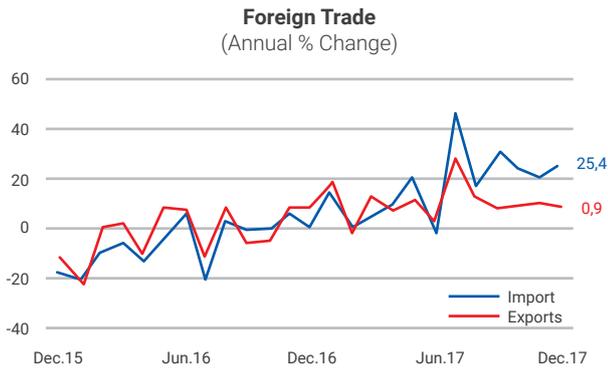
Source: TurkStat, Isbank, Datastream
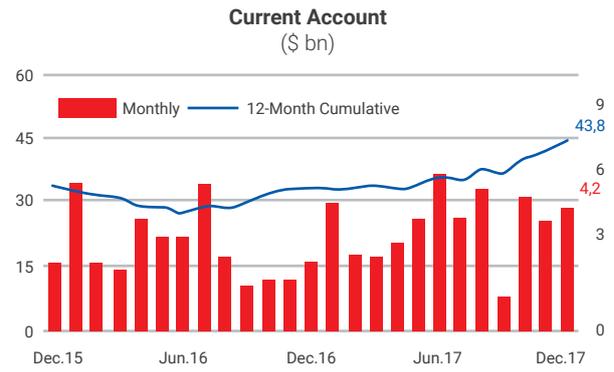
Foreign Trade Balance ($ bn)						Oct.17	Nov.17	Dec.17
Exports	152,5	151,8	157,6	143,8	142,5	154,5	156,0	157,1
Imports	236,5	251,7	242,2	207,2	198,6	225,5	229,1	233,8
Foreign Trade Balance	-84,1	-99,9	-84,6	-63,4	-56,1	-71,0	-73,2	-76,7
Coverage Ratio (%)	64,5	60,3	65,1	69,4	71,8	68,5	68,1	67,2

Source: CBRT, Isbank

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2. Overview of the Turkish Construction Industry

Even though the Turkish construction industry and its components (sub-sectors) have achieved fast growth in the past 30 years, they have benefited the most from the economic developments following the 2001 crisis. The construction industry accelerated its institutionalization process with the structural transformation it has undergone during that time.

The construction industry and its related branches have been a driving force for growth. Industry and service sectors have also refreshed themselves thanks to the development in the construction sector.

The construction industry has become an important brand by making a name for itself through projects not only in Turkey but also abroad. The Turkish construction and contracting businesses displayed a competitive attitude with sound financial resources and turned into an industry, bringing in foreign currency into the country with the projects they undertake abroad. In this context, it is beneficial to analyze the construction industry regarding its overseas and domestic activities.

2.1. Overseas Contracting Services

Turkish contractors have undertaken 9,300 projects worth $355 billion in their international operations over the last 45 years. Eurasian, Middle Eastern and African countries accounted for 46.8%, 26.2%, and 18.1% of the said amount[41].

The top five countries appear to be Russia (19.7%), Turkmenistan (13.6%), Libya (8.4%), Iraq (7.2%) and Kazakhstan (6.4%) since the provision of the first international contracting services[42].

Construction has grown not only in the housing industry, part of our everyday life but also in areas that require long-term technical know-how and expertise (i.e., dams, power plants, bridges, tunnels). Turkish companies have successfully completed many international projects in such technically challenging infrastructure investments.

ENR, an international construction industry magazine, has published a list of The World's Top 250 International Contractors based on revenues generated by contractors through activities outside their countries in the previous year. The number of Turkish contracting firms on the list rose to 46 this year from 40 in

2015. Therefore, Turkey maintained the second place in the world after China, which ranked first with 65 companies. The US ranked third with 43 companies. The size of the top 250 firms in the international construction industry contracted by 6.4% to $468 billion last year as one of the industries most affected by the global economic uncertainty[43].

Projects Undertaken as Overseas Contracting Services (2008-July 2017)

Projects undertake by the Turkish construction industry 2008-2017

$ mn

Years	Number	Total Project Cost	Average Project Cost
2008	642	23.832	37,1
2009	507	20.256	39,9
2010	624	23.358	37,4
2011	556	23.418	42,1
2012	543	30.352	55,9
2013	423	30.021	70,9
2014	344	26.864	78,1
2015	259	23,213	89,6
2016	180	12,885	71,6
2017 *July*	74	5,866	79,3

40 Turkish companies rank among the World's top 250 contractiong firms

Source: AA and Ministry of Economy, August 2017

The international contracting market has contracted by 14% in the last three years while the performance of Turkish contractors has increased abroad. The total market shares of the listed Turkish firms stood at 3.8%, 4.3%, 4.6%, and 5.5% in 2013, 2014, 2015, and 2016, respectively. While the share of Turkish contractors in regional turnovers declined in Europe, it surged in all main markets. Its market share has risen from 7.9%, 5.5%, and 4.7% to 9.1%, 7% and 5.1% in the Middle East, Asia, and Africa, respectively[44].

Accordingly, the annual amount of new overseas projects undertaken by Turkish contractors stood at $30 billion from 2012-2013. It came in at $27 billion in 2014, $22 billion in 2015, and $14.8 billion in 2017. The top five countries are Tanzania (17.3%), S. Arabia (14.1%), Russia (12.1%), UAE (9.1%) and Kazakhstan (7.4%) based on the projects undertaken in 2017[45]. In 2017, the number of projects undertaken as overseas contracting service in 52 countries totaled 263.

Overseas Contracting Services and Project Distribution
(Million Dollars - 2015- February 2018)

	2015	2016	2017	2018 February
Number of Projects	265	190	263	20
Number of Countries	57	56	52	10
Project Cost	23,175	13,817	14,820	874
Avg. Project Cost	87	73	56	44

Source: Ministry of Economy

41   TMB, "Construction Industry Analysis" January 2018, p. 20
42   TMB, "Construction Sector Analysis", July 2017, p. 19
43   http://aa.com.tr/tr/ekonomi/yurt-disi-muteahhitlik-hizmetlerine-turk-damgasi-/882144, 21.08.2107, s.1
44   ibid. p.1
45   (TMB), "Construction Industry Analysis," January 2017, p. 16 and 'Construction Industry Analysis', January 2018, p. 20

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Overseas contracting services, which is an important component of the construction industry, has become extremely valuable for Turkey both in terms of construction materials and service exports. The most crucial point in the industry as it has reached a particular size regarding the number of projects is the positive and negative impact of geopolitical developments on project values.

- Because the majority of the countries are energy exporters in overseas contracting services as main markets, they have seen a decline in demand from time to time. On the other hand, the industry has been influenced by the geopolitical problems in the Middle East and Turkey's very vicinity..

- Sub-Saharan Africa, India, Association of South East Asian Nations (ASEAN), between which and Turkey a Sectoral Dialog Partnership was launched in August 2017, and also Latin American markets are closely monitored for new opportunities that could offset the loss in the Russian, Libyan and Iraqi markets, which account for around 35% of total overseas contracting servicesr[46].

be more favorable than 2016-2017 when we saw a momentum loss after a decade of growth in overseas contracting services[47].

We should take into account certain remarkable points in the overseas contracting services industry which has a very flexible structure in the face of any developments.

- The effects of instability resulting from the events following the Arab spring
- Increased industry activity in this region thanks to the normalization of relations with Russia,
- Suspension of some projects especially those related to infrastructure caused by the crises in oil and gas-rich countries,
- Increasing competition in the world and overseas contracting services after the 2008 crisis,
- The necessity for contractors to undertake the financing of infrastructure projects and large projects (especially those of build-operate-transfer projects). The entry of Turkish companies into rivalry with the Chinese and US companies in this area.

Cost of the Contracting Projects-Number of Projects
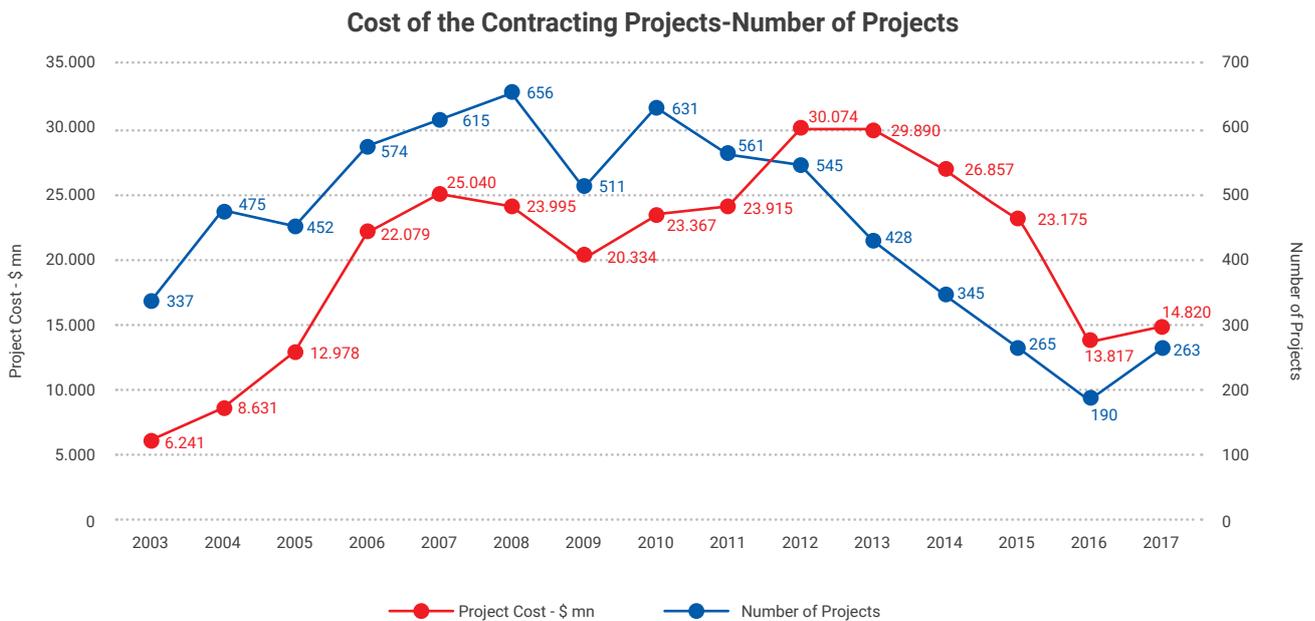
Source: Ministry of Economy-January 2018

- Likely to be more stable in the coming period, energy prices can have a positive impact in the investment climate and financing conditions in markets such as Saudi Arabia, Algeria, and Turkmenistan, where Turkish contracting companies have reliable references. We can say that the worst period has been left behind given the developments in Iraq, normalization of relations with Russia, and the opportunities in potential markets, especially in Sub-Saharan Africa. The next period is expected to

- The negative effect of instabilities in Iraq and Syria on the market in the relevant regions,
- The activities in the African market with the government's initiatives and their positive results,

Contracting services abroad have created added value through foreign currency inflow, employment, support for exports, technology transfer, machinery park, and overseas expansion. This becomes even more evident in the Balance of Payments Services Items.

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46   Turkey Contractors Association (TMB), "Construction Industry Analysis," January 2018, p. 20
47   ibid, p. 20

The balance of Payments Services Item Construction Figures ($ million)

	2012	2013	2014	2015	2016	2017
Construction Services Income	1.029	675	1.084	375	512	474
Construction Services Expenses	0	0	0	0	0	34

Source: CBRT, December 2018 - Latest data March 6, 2018

On the other hand, overseas contracting services are critical in developing social and political relations.

2.2. Domestic Construction and Housing Industry

The most important driver of the construction industry's development has been the demand for housing and infrastructure investments related to the internal dynamics. The industry has obtained significant achievements especially in the last two decades and improved itself.

In the housing sub-sector, the most important component of the construction industry, steps were taken for a sound and proper development with growing influence of the public sector's guidance in the 1980s. As a result, outside the general administration, the Housing Development and Public Partnership Administration (TOKİ) was founded in 1984 with the goal of resolving the housing and urbanization issue, creating more jobs and decreasing unemployment. The function of TOKİ was to create a plan to meet the fast-growing housing demand by providing incentives for the housing production in Turkey.

Since its foundation, it has taken a vital role in the determination and implementation of settlement and housing policies with resources obtained from the Housing Development Fund. Since its establishment in 1984, the Housing Development Administration has been involved in not only construction activities for housing, social facilities and public needs but also contributed significantly to the improvement of the income distribution.

TOKİ lead the industry by acting on the social benefit principle in these projects. It has obtained significant achievements in the production of innovative, environmentally-sensitive, earthquake-resistant houses as required by Turkish society and the economy. TOKİ has become a 'market maker' in its operation regions, reaching a structure whereby it regulates supply&demand and price balance.

TOKİ built 817,089 residences within 3,543 construction sites in 81 provinces selling 633,074 and delivering 611,723 of it. 698,497 units (86.15%) sold were produced for social housing purposes. 5,847 tenders worth 99.41 billion TRY (including VAT) were concluded during the construction and project phases[48].

TOKİ sets an example with its projects both within and outside the country. In this context, it provides the know-how to other states for their house production policies. Thanks to its model structure, TOKİ has an important knowledge accumulation to share with countries facing similar problems.

On the other hand, TOKİ also undertakes renovation projects with local administrations as part of the urban transformation projects that aim to renew old building stock due to Turkey's position as an earthquake-prone country.

70% of Turkey's territory is located in the 1st and 2nd-degree earthquake zones. Therefore, it faces significant risk. Urban transformation is one of the most important activities for the prevention of possible casualties. TOKİ serves as the most active institution in this process.

TOKİ currently conducts projects in a nearly 58 million-square-meter area under the urban program transformation in 60 cities. Under the urban transformation initiative, the administration has been implementing in the last decade 233 urban transformation projects with an investment of 17 billion TL. 70,000 out of 286,500 housing units have been developed so far[49].

TOKİ Chairman Ergun Turan explained that so far they prepared designs for the transformation of the shanties to 283,020 houses in 334 projects under the urban renewal program initiated together with the local administrations. Mr. Turan stated that 56,354 houses had been produced in 128 projects and that the number of houses to be produced through another 128 projects would add up to 226,666. Turan said, "Our ongoing projects are carried out in cooperation with 127 municipalities in a total of 58 provinces with 17 in Istanbul, 12 in Ankara and 4 in İzmir[50].

Urban transformation requires the reconstruction of around 7.5 million buildings according to earthquake and modern circumstances. Urban transformation should also add value to the relevant cities rather than appearing as a burden. TOKİ pays attention to these two aspects in its above-mentioned activities.

TOKİ also creates spaces to meet shelter and social needs in emergencies and disasters. The administration started its housing construction and infrastructure arrangements in the regions battered by natural disasters together with 1992 Erzincan earthquake.

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48   TOKİ, "Housing Production Report", January 3, 2018, p. 1
49   http://www.haberturk.com/sosyal-ihtiyaca-da-cevap-veriyoruz-1852359-ekonomi, February 25, 2018, p.1
50   https://www.toki.gov.tr/haber/toki-baskani-mehmet-ergun-turan-toki-onumuzdeki-donemde-kentsel-donusume-agirlik-verecek March 2018, p.1

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Until 2017, it has built 37,734 disaster houses in 132 projects in various regions of Turkey and abroad. It has built social facilities meeting various needs such as hospitals, schools in addition to 4,620 houses in countries stricken with disasters.

TOKİ adopted the following criteria for the increasingly important 'Urban Transformation' process.

- The main goal in urban transformation is to build neighborhoods that prioritize values by increasing the quality of life in urban projects, balancing the growing economic imbalances and global pressures, and removing social inequality and housing shortages.

- The inability of cities to respond to rapidly rising housing demand in line with normal growth rate caused improper construction threatening the identity of the Turkish cities for years. In addition to the slums and illegal buildings, we face a serious problem regarding the housing stock that completed its economic life especially in cities with high earthquake risk. For many years, the biggest obstacle to the solution was the failure to implement social housing policies for the low-income people who did not have the power to buy a house. TOKİ transforms slums, illegal buildings and areas faced with disaster risk while trying to prevent the creation of new slum areas with the houses it produces for the low-income citizens.

- TOKİ carries on its urban transformation activities by keeping in mind the following points seen in the 10th Development Plan: prioritizing projects that increase living space and quality especially in the areas bearing disaster risks, adopting an approach that supports social integration by combining the living spaces of different income groups, paying attention to ideal area size and integrity developing procedures and principles that define prioritization, preparation, implementation, monitoring and governance processes using models and methods that minimize public expenditure in the financing of projects.

TOKİ Operations in Summary (March 2018)

Republic of Turkey Prime Ministry Housing Development Administration.
We prepare our cities for 2023 and the future.

The target is 1.2 million houses

81 CITIES
817,000 HOUSES IN 3,543 CONSTRUCTION SITES 10,583 SOCIAL PROJECTS

100,000 POPULATION 31 CITIES	2002-2011 500,000 HOUSES
2011-2023 700,000 HOUSES	99,41 BILLION TL INVESTMENT

Source: TOKİ

OVERVIEW OF THE REAL ESTATE AND HOUSING INDUSTRY
May 2018

TOKİ Housing Production Breakdown (March 2018)

Republıc of Turkey Prime Ministry
Housing Development Administration

HOUSING
PRODUCTION
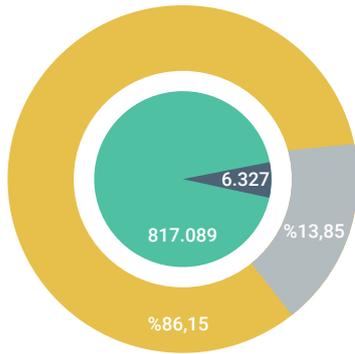
■ Social Housing Production	698.497
■ Resource Development	112.265
■ Under Bidding Process	6.327
■ Grand Total	817.089

%44,96
Low and Medium
Income Group
364.411

%17,16
Shanty
Transformation
139.196

%18,59
Poor
Group
150.741

%4,65
Disaster Housing
Practice
37.734

%0,79
Agriculture &
Village Practices
6.415

Source: TOKİ

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TOKİ
HOUSING DEVELOPMENT ADMINISTRATION

Schools 1.050

Colleges 19

Sports Hall 993

Libraries 42

Dormitories/Hostels 189

Public Service 193
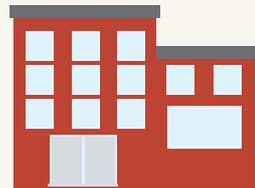
Hospitals 266

Health Care Centers 96
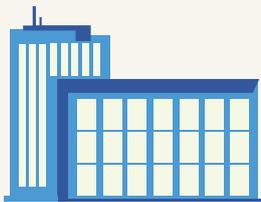
Trade Centers 892

Mosques 678

The total number of social facilities including Affection House, Barrier-free Life Center, Nursing Home, Pharmacies, Police Station, Military Service Buldings, Public Education Center, Culture Center, the Number of Workplaces in Community Industry sites, Practice Hotel...

10.583

Stadiums 19

These operations have been supported with 10,583 social facilities. In today's urban and construction approach, constructing a building does not suffice as it requires facilities that will meet all social needs.

Aware of the construction industry's importance for the economy and social life, TOKİ will continue to have a leading role in the industry. It carries on its activities to develop the industry as well as plan the future decades.

Also, TOKİ took the first step in implementing "real estate certificates" which meets contractors' funding needs by bringing together the construction and finance industries and enables small savers to access real estates. Under the new regulations, the public acquired real estate certificates for the first time in Makro İnşaat's project "Park Mavera III" under TOKİ's guarantee. It gave both the industry and the financial sector to obtain a new financial instrument.

Other institutions will be able to follow this certificate which marks a beginning for the securitization of real estates. Issuance different types of real estate-based securities benefit the Turkish economy further.

The diversification and widespread use of real estate-based securities will later allow the emergence of private banks and asset companies investing in this type of instruments. Therefore, the real estate industry will have stronger relations with the financial industry, which in turn, will create sustainable financing models.

2.3. Real Estate Investment Trusts and Emlak Konut REIC

Another impact of improving capital markets in the 1980s was the institutionalization of the construction industry and management of related funds. Following the introduction of the related regulations in due course, the construction industry (a real sector) is being bridged over with the financial markets. In this respect, Real Estate Investment Trusts (REIT) are critical organizations. REICs were first established in the US in the 1960s and then became widespread throughout the world. Today, there are REIT organizations in 36 countries. Global investments funds mostly prefer to invest in REICs. The reason is that REICs are transparent, corporate and controllable organizations with true appraisal values of all the real estate holdings in their portfolios.

There are 32 REICs in Turkey[51]. Borsa Istanbul's performance started the year 2018 at 117,524 points. On the other hand, the REIC index started at 44,515 in the first quarter and closed at 42,609 at the end of it. Data regarding the REIC market value were announced for the fourth quarter of 2017. The number of REICs adds up

to 31. Its value rose by 26.9 billion TL or $7.12 billion in 2017 although it meant a slight increase compared with the same period of 2017[52].

Real estate investment trusts are defined in the framework of capital market law according to the Turkish Legislation. Accordingly, regulated real estate investment partnerships are capital market institutions that can invest in real estates, real estate projects, real estate-based rights and capital market tools, established to carry out specific projects or invest in a specific real estate and entitled to carry out the allowed activities with revenues exempted from corporate tax (Corporate Tax Law, Art. 5/1-d-4)[53].

Founded in 1953, Emlak Konut REIC is one of the most established companies in Turkey whose main expertise lies in housing production. This brand value developing over the years with the implementation of various projects was transformed into Real Estate Investment Company in 2002. Emlak Konut REIC, mainly owned by TOKİ, is the largest real estate investment partnership operating in Turkey in terms of market value, real estate portfolio, and land stock.

Emlak Konut REIC purchases land in Turkey, develops real estates for middle and upper-middle income groups, and undertakes marketing and sales activities. Our company considers producing value for our country as one of the most important aspects. The company's primary goal is to increase the number of (tangible and intangible) values its shareholders and other stakeholders by designing innovative and contemporary projects.

Emlak Konut REIC conducted its initial public offering in 2010 and secondary market offering in 2013 to sustain its rapid growth. These public offerings achieved significant success by attracting record individual investor demand and turning out to be 5th biggest public offering in the history of Republic. Taking place in November 2013, the secondary offering oversubscribed 2.3 times. Emlak Konut's secondary offering attracted over 100 international investors from 20 countries. It became the biggest public offering in the form of capital contribution in Central and Eastern Europe, the Middle East, and Africa.

Emlak Konut REIC not only manufactures housing but also develops public buildings, commercial real estates, and social facilities. It produced and sold approximately 130,072 units from 2003 to December 2017[54].

Emlak Konut REIC applies two different business models effectively to achieve its administrative goals and strategies. The first business model is "Revenue Sharing Model (RSM)," and the second is "Lump Sum Turnkey Project Cost Model."

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51   Bloomberg
52   GYODER, 'Indicator, Turkish Construction Sector 2017 4th Quarter Report', Issue: 11, February 21, 2018
53   http://www.spk.gov.tr/indexpage.aspx?pageid=409&submenuheader=1
54   http://www.emlakkonut.com.tr/tr-TR/emlak-konut-icmal

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Emlak Konut
gained REIC
status in 2002

2002

Secondary Public
Offering, capital
increase.

%50,4 Free Float

2013

250.000
Targeted Units

2023

1953

Emlak Konut REIC
was founded in
1953.

Source: Emlak Konut Investor Presentation

2010

Initial Public
Offering, capital
increase.

%25 Free Float

2018 1Ç

Turkey's largest
REIC.

**Total assets
21,90 billion TRY**

One of Emlak Konut REIC'S important values is the business models it applies and develops. The company develops and applies these models with a continuous improvement approach. The company's methods also serve as an important tool in risk management as they aim to complete processes healthily by covering the financial aspects and construction stage.

Revenue Sharing Model

Revenues:
- The contractor provides Emlak Konut REIC with a minimum amount revenue equal to or higher than the value of the land where the project is developed.
- The revenue sharing rate is determined at the beginning.

Contractor's Obligations:
- It develops projects. It is responsible for the entire process from financing to sales and pricing. Design, construction, and marketing materials are subject to Emlak Konut REIC's approval.
- Emlak Konut REIC conducts the technical control of buildings.

Risk Transfer:
- The contractor undertakes most of the development and financing risks regarding the entire development process.
- Emlak Konut REIC undertakes limited financial and development risks, including the provision of land and possible building stocks for the project.
- Emlak Konut REIC is gl` ` oventhe flexibility large-scale projects.

Source: Emlak Konut REIC

From a financial point of view, the models contain factors such as profit, cost and risk control while making a significant contribution concerning construction techniques and supervision.

Emlak Konut REIC procures the lands for its project developments from TOKİ to a large extent and from third parties to a limited extent.

According to the construction and real estate sector accounting, sales and costs are entered in the income statement only when Emlak Konut REIC approves their completion.

Our company has a conscientiously developed 65-year brand value. It proves effective in the relevant models contributing positively to the construction, marketing, and sales stages.

Turnkey Project Model

Revenues:
- The revenue generated from the sales of housing and commercial units entirely belong to Emlak Konut REIC.
- The contractor recelves the progress payment based on the physical development of the project.

Selection of Contractors:
- The most approplate is selected based on the lowest bids offered at tenders to be carried out pursuant to the company regulations.

Risk Transfer:
- Emlak Konut REIC assumes all the risks and responsibillities related to the financing, development, and sales of a project.

Source: Emlak Konut REIC

The sales models underlying Emlak Konut REIC's success and the magnitude of the trust in the company are reflected in the figures, too. Following is a summary of our company's sales, land portfolio and profitability figures.

Emlak Konut REIC With Numbers

6,1 Millon sqm Land Portfolio Size	**75** Millon TRY Total Revenue Sharing Tender	**8,7** Millon TRY Total Turnkey Project Tender
7,4 Billon TRY Pre-sales as of December 2017	**6,7** Billon TRY 4 year Total profit Target	**1,8** Billon TRY Expenced year-end Target

130,000
Units
Number of Produced and Tendered Units

Source: Emlak Konut REIC

Emlak Konut REIC uses the Revenue Sharing Model more in practice creating a substantial added value as a result.

Revenue Sharing Model
(Value Added in Completed Projects)*

Million TRY

- 🟥 Base Value of Land at time of the Tender
- 🟩 Emlak Konut's share in total Tender Value
- 🟦 Emlak Konut's share in Recognized Value

Base Value of Land at time of the Tender	Emlak Konut's share in total Tender Value	Emlak Konut's share in Recognized Value
3.716	6.248	8.619
	1,68x	1,38x
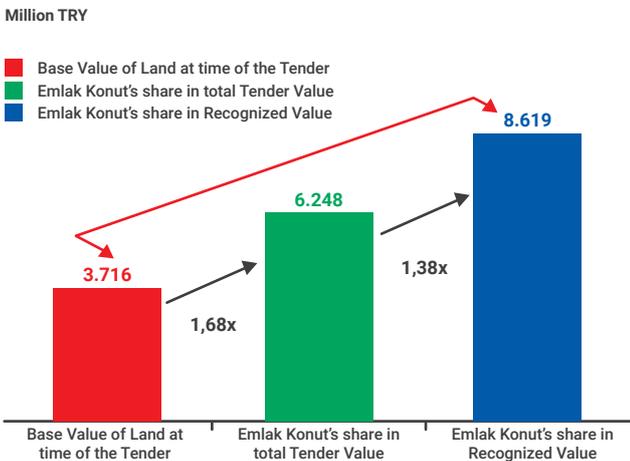
The past performance may not match with the future performance.
Source: Emlak Konut REIC

We observe the positive impact of the multiplier ratio in the tendered (ongoing) Revenue Sharing Model. A leading industry company, Emlak Konut REIC has built a very successful track record in the sales of branded housing projects, especially after the public offering. In 2016 and 2017, there was a decline in terms of quantity, but the targets were reached in terms of square meters sold. However, regardless of the sales type, it is beneficial to take into account the macro-effects of the treacherous coup attempt which

took place in 2016. Also, it is remarkable that Emlak Konut REIC achieved such a sales success despite this kind of risk.

Revenue Sharing Model (Tendered Projects)

Million TRY

- 🟥 Base Value of Land at time of the Tender
- 🟩 Emlak Konut's share in total Tender Value

Base Value of Land at time of the Tender	Emlak Konut's share in total Tender Value
8.362	6.248
	2,02x
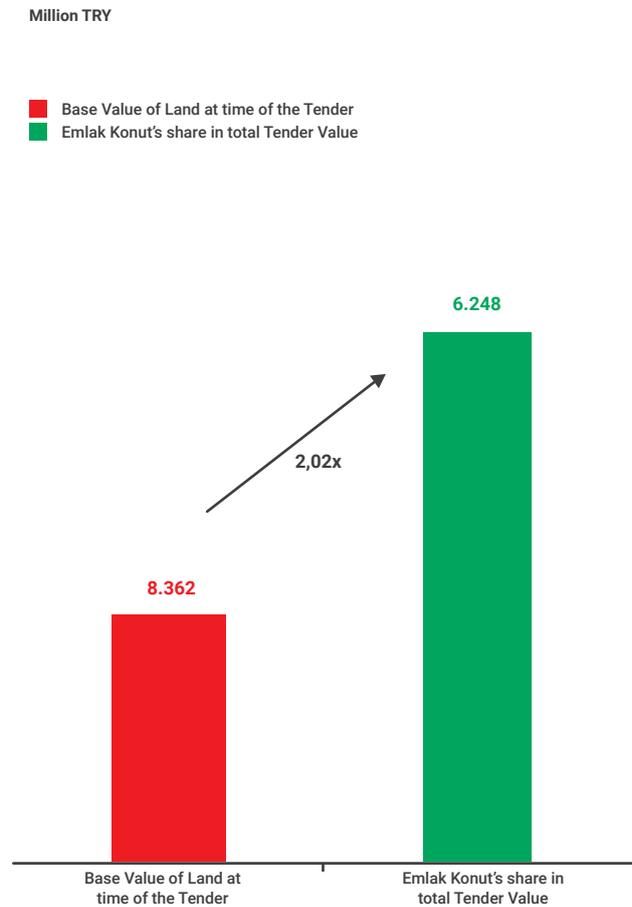
Source: Emlak Konut REIC

Number of Units Sold

2010	2011	2012	2013	2014	2015	2016	2017	2018 1Q
7.693	12.405	8.951	14.991	9.840	9.760	7.847	6.569	983
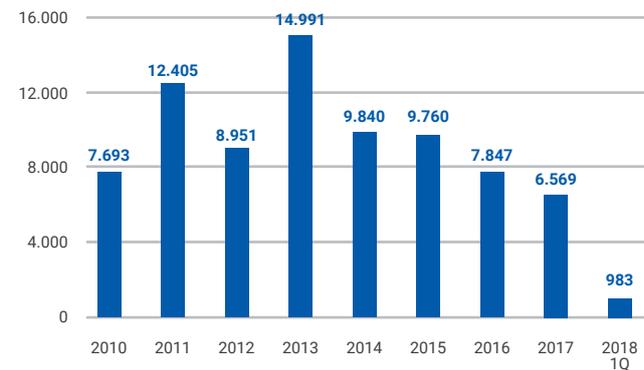
Source: Emlak Konut REIC

Unit sales provide valuable data, but it will be more accurate to examine the sales amounts to analyze the results from a financial perspective. Although the number of units declined in some years, their sales produced quite satisfactory results in terms of amount.

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Total Sales Value (billion TL)

Year	Value
2010	2.078
2011	3.189
2012	3.332
2013	5.703
2014	5.112
2015	5.936
2016	5.871
2017	7.441
2018 1Q	1.054
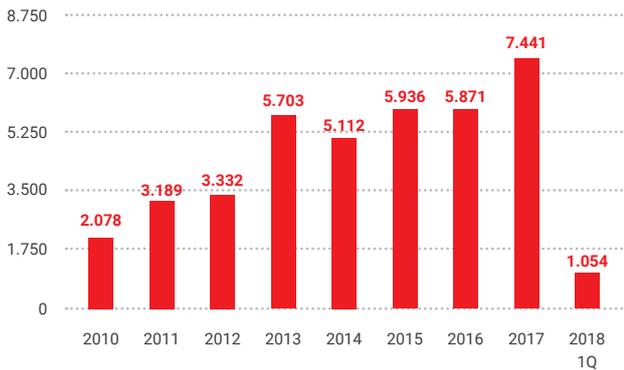
Source: Emlak Konut REIC

Another important indicator for sales figures involves gross square meter sizes. As we mentioned above, our space-based sales show a very strong trend.

Sales of Gross Area (in '000 square meters)

Year	Value
2010	933
2011	1.401
2012	1.021
2013	1.744
2014	1.242
2015	1.348
2016	1.138
2017	1.089
2018 1Q	152

Source: Emlak Konut REIC

Real Estate REIC brand is not only a source of trust for domestic consumers and investors but also an attractive option for foreign buyers.

Sales to Foreign Nationals (million TL)

Year	Value
2010	15
2011	27
2012	223
2013	346
2014	649
2015	1.052
2016	446
2017	415
2018 1Q	131
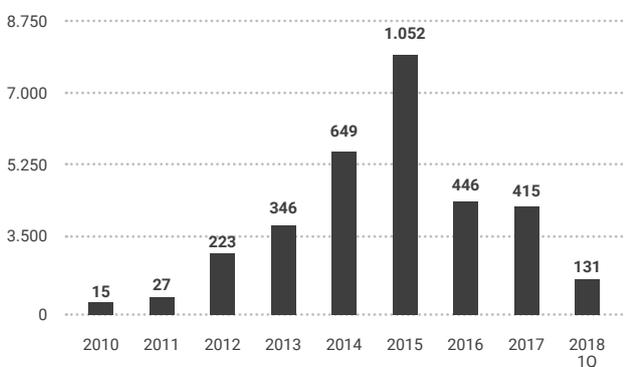
Source: Emlak Konut REIC

We can see the reflection of the data presented in the above section on the robust performance in financial statements. The company assets almost tripled by the end of 2017 compared to 2010.

Changes to Emlak Konut REIC's Assets

Year	Value
2011	7.699
2012	8.579
2013	13.471
2014	14.491
2015	16.736
2016	18.702
2017	20.624
2018 1Q	21.902
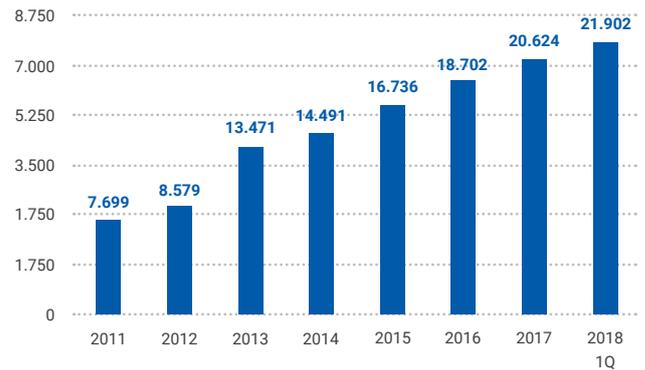
Source: Emlak Konut REIC

We see a similar situation in terms of equity. The equities almost tripled at the end of 2017 compared to 2010. The strength of equity also means that the company is more resistant to risks.

Emlak Konut REIC's Equity Changes

Year	Value
2010	3.935
2011	3.988
2012	4.392
2013	8.354
2014	8.751
2015	9.325
2016	10.730
2017	12.466
2018 1Q	13.333
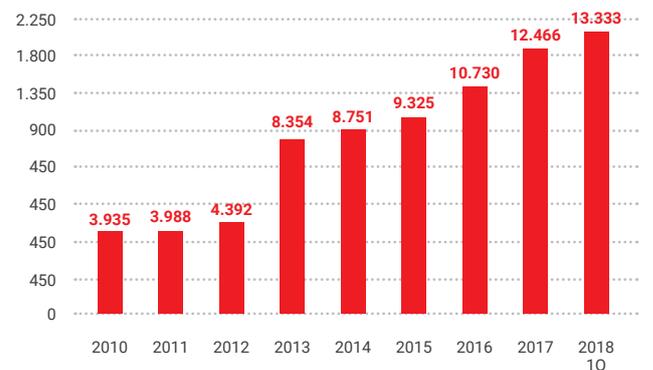
Source: Emlak Konut REIC

We see a favorable development over the years in earnings before interest and tax figures valued especially by the capital market investors.

Annual Change in EBITDA

Year	Value
2010	647
2011	256
2012	530
2013	1.006
2014	751
2015	907
2016	1.915
2017	2.216
2018 1Q	975
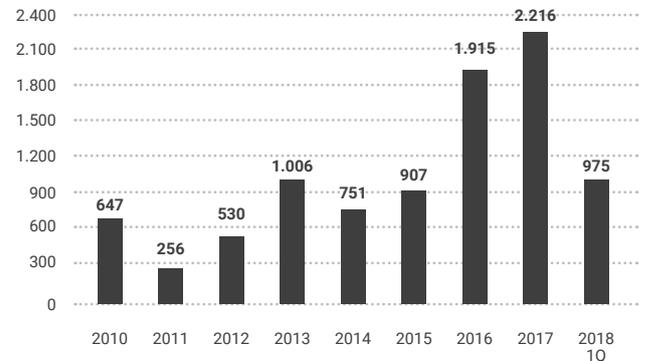
Source: Emlak Konut REIC

Real Estate Housing REIC operates on the basis of its stipulated mission: "Following real estate developments and innovations closely as one of the leading organizations shaping the domestic industry, and caring

about the social value and customer satisfaction while producing planned, quality and environment-friendly settlement places that offer peaceful and safe living spaces."

"Real Estate Investment Funds" were also established as a joint platform for real estate industry and fund suppliers. This will open a new path for Turkish capital markets and the construction industry.

The Real Estate Investment Fund is an unincorporated entity is established by portfolio management and real estate portfolio management companies to operate the portfolio consisting of the assets and transactions determined by the Capital Markets Board (Board) according to the principles of fiduciary ownership on shareholders' account with the money collected from the qualified investors[55].

The fact that the real estate investment funds are implemented is extremely important for the construction industry as they eliminate the need for institutional funds.

Another important aspect is the increase and diversification of real estate-based financial instruments. The professional organizations carry on their activities along with the CMB's relevant arrangements. The completion of the process in line with Turkey's requirements will bring about positive results both in terms of the construction and the financial industry.

The Turkish construction industry is sure to maintain its role as the driving force of the country's economy, thanks to the dynamic and flexible structure it has acquired over the years. The growth rate in other related business lines will also benefit from the multiplier effect created by the construction industry that sets sub-components in motion

2.4. The Construction Industry's Impact on Growth

The construction industry holds a special place in most countries' economies as it acts as leverage with the added value and employment opportunities it creates. Today, the concept of "construction" comprises not only environmental construction but also related activities, such as maintenance, repair, and operations. Nowadays, construction production is defined not only by building a structure but also by creating an environment-friendly, socially-responsible, transparent and sustainable production with direct effects on society[56]. The construction industry's stimulating impact on reviving the economy and employment has been used and observed in economic policies since the Great Depression.

2.4.1. Global Construction Industry Growth

The construction industry also has great importance for the global economy. Considering the global growth issues, it needs to be carefully monitored in terms of increasing employment and setting other industries in motion.

The construction industry follows a parallel course with the economic activity around the world, and the industry growth rate is generally higher than economic growth.

The size of the global construction industry was $7.2 trillion in 2013, and it is projected to reach $15 trillion by 2025. The construction industry's current share in the global economy amounts to 10-12%.

Gross Global Construction Output
(Real, $ billion)*
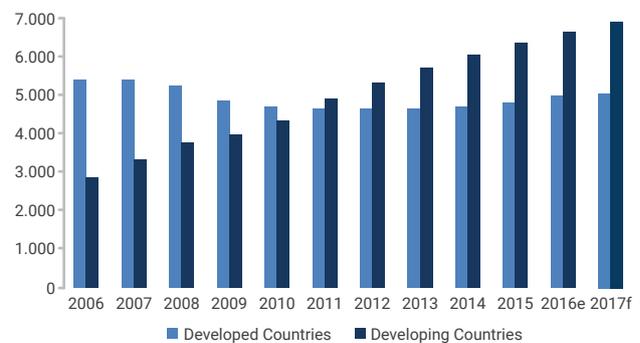
*2016 Provisional-2017 Forecast
Source: Oxford Economics, Euler Hermes*

By 2025, the share of the construction industry s forecast to be around 16-17% and 10% in developing and developed countries, respectively[57].

Therefore, it is obvious that the Turkish construction industry's share of the GDP may increase further in the coming years.

In 2017, the output of the global construction industry is estimated to rise by 3.5% annually. In the last 10-year period, the industry's growth slowed down in the developed countries while accelerating in the emerging countries in parallel with higher infrastructure and housing investments.

The Turkish construction industry's 2017 growth rate, approximately 7.5%, is estimated to be higher than the average of European countries which is around 6%[58].

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55   http://www.spk.gov.tr/indexpage.aspx?pageid=1212&submenuheader=0
56   Ergül, Nuray, Effects of Globaliation on the Construction Industry, Tax Issues Magazine, Issue: 227, August 2007
57   Isbank, "Construction and Real Estate-I", February 2016, p.1
58   Zengin, Aslı Şat, "Construction Sector-Economic Research Department", Isbank, February 2018, p.11

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Construction Industry's Growth Projections
(%, 2017)
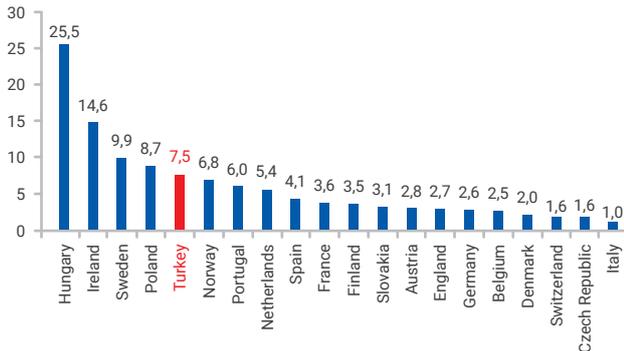
Source: Euler Hermes, Euroconstruct, Isbank

Developing countries' share in the global construction industry revenues amounts to 35% as of 2013. This share is estimated to exceed 60% by 2025 with China and India taking the lead in the market[59].

We can summarize the global construction industry's expectations from 2017 as such[60];

- With the slow recovery in developed markets, the global construction industry is expected to stabilize in the medium term.

- The impact of higher interest rates and price risks on household purchasing decisions companies' investment capacities should be carefully monitored in 2017.

- One of the factors to be followed is the relative growth loss in developing countries as a result of increased infrastructure and commercial real estate investments in developing countries.

However, downside risks may also jeopardize this scenario. These are:

- Stronger-than-expected problems for particularly commodity exporters in developing markets lead to limitations on public investments

- Companies feel pressure on their ability to pay their debts with increased interest rates and households show lack of enthusiasm to buy new houses

- It can be summarized as the disruption of construction activities in some regions due to geopolitical and related risks.

The construction industry's size in the developing countries is higher than the one in developed countries since 2012. The growth in the construction sector in General on economic growth. As a matter of fact, the

global growth was 3.3% and 3.4% in 2013 and 2014, respectively whereas the construction industry grew by 4.5% and 3.5%, respectively. Estimated to have grown by 4% in 2015, the construction industry can be said to receive the largest contribution from China, the United States, and India[61].

We observe that global construction activities have gained momentum in Europe and North America in 2016. The growth rate is expected to rise from 1.7% in 2015 to 2.2% in 2016. The most dynamic improvements have taken place in the US and Scandinavian countries. In contrast, the industry tends to a slowdown in emerging markets. This year's growth rate is expected to stand at 3.4% as opposed to 7% for the last decade[62].

Also, we observe the ramifications of global imbalances in the construction industry and its components. Nonetheless, the industry always enjoys a certain potential due to demographic factors, infrastructure requirements, and economic support through public expenditures.

It is evident that each sector is affected by risks according to its own dynamics. Accordingly, following is an explanation of the comparative advantages and weaknesses of the global construction industry over the next few years.

**Risk Analysis of the
Global Construction Industry**

Strengths	Weaknesses
Ongoing long-term infrastructure and housing opportunities in developing countries	Large number of contractors with weak financial structure in global sense
Presence of large global companies in the industry	Being easily affected by general economic and geopolitical risks
Revitalizing effect of new standards in mature markets	Postponement of infrastructure projects in some developing countries
Global population increase and higher urbanization rate	The sensitivity of both households and firms to the increase in interest rate

59   Sezgin, Şat Göksun and Aşkara Ahmet, 'Construction Industry', Isbank, January 2016, p.12
60   Euler Hermes, "Economic Outlook," No: 1223, February 2016, p.13
61   Sezgin, Şat Göksun and Aşkara Ahmet, 'Construction Industry', Isbank, January 2016, p.4
62   Euler Hermes, "Economic Outlook," No: 1223, February 2016, p.13

We observe that the most fundamental measures taken after the 2008 crisis are largely based on monetary policies. However, monetary policies led to the desired global growth outcome quite late. The Trump administration said that it would increase the fiscal and related public expenditures. Led by Turkey among the other emerging countries so far, infrastructure investments and the policy of revitalization for related industries will be increasingly applied across the globe.

Due to the reasons briefly stated above, the global construction industry will continue to grow throughout 2018 despite facing various risks. The growth of the construction industry and its components seem to derive from developing countries.

2.4.2. Growth in the Turkish Construction Industry

The construction industry and sub-sector components are greatly affected by general economic developments. The industry is susceptible to the economy at varying levels in every country throughout the world. The Turkish construction industry, largely dependent on national capital, has a significant impact on employment and production as it is related to many fields of occupation. The industry boasts huge domestic and International experience and potential, functioning as a locomotive industry due to its capacity to put in motion over 250 sub-sectors that rely on it, and as an unemployment absorber due to its ability to provide a high number of jobs.

The industry is one of Turkey's most important business lines, too. The achievements in Turkey and have turned the industry into an important determinant of the Turkish economy. Its direct share in GDP is over 8% with indirect share adding up to 30% with other affiliated industries[63].

GDP and Construction Sector Growth Rates (%)
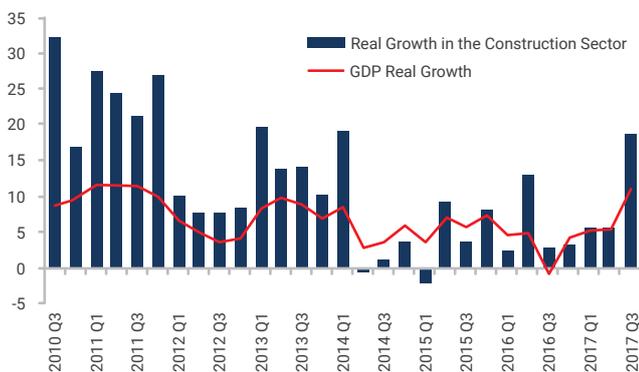
Source: TurkStat, Isbank

In 2016, 5.4%-real growth in the construction industry was higher than the GDP growth which was 3.2%.

Also, the industry's annual growth of 10.2% exceeded GDP growth of 7.4% in the three quarters of 2017. In this period, construction investments showed a rapid increase by 16% compared to the same period of previous year. In parallel with the 11.1% rapid increase in economic activity in real terms in the third quarter of 2017, the construction industry also performed strongly with 18.7% compared to the first half of the year[64].

The construction industry plays an important role in economic growth, and there is a significant correlation between the construction industry and GDP (growth) rates. The fast decline after the 2001 crisis significantly affected both the industry and GDP in Turkey. A similar situation occurred in the aftermath of the 2008 global crisis. However, it must be noted that along with the GDP, a very swift and sharp recovery occurred. In this sense, the growth in the construction industry (downsizing) is a leading indicator of GDP.

GDP-Construction Economic Activity Line
(Chain Index, 2009=100)

Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Annual
2015	166,8	197,7	210,8	219,5	198,7
2016	170,8	223	216,8	227	209,4
2017	180,4	235,3	257,3	-	-

Source: TurkStat

TurkStat[65] Based on the activities comprising the gross domestic product, the construction industry's chain volume index rose by 5.6%, 5.5% and 18.7% in the first, second and third quarters of 2017 compared to the same quarters last year.

The construction industry completed 2016 with 8.6% share in current values as part of the economic activities constituting the gross domestic product. The average for the first three quarters of 2017 stood at 8.5%. The industry's successful growth rate affected the GDP in a positively, too the industry maintained its usual growth trend with its own dynamics and greater stability. We observed a similar trend also in 2016, but the rapid increase in the second quarter of 2016 seems to have resulted from private and public sector investments and the pickup in demand. From the third quarter of 2016 onwards, the industry remained stable within a certain range despite uncertainties resulting from domestic developments. In the first quarter of 2017, the rate of change seems much stronger than the same period of 2017.

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63   KPMG, 'Sectoral Outlook', https://home.kpmg.com/tr/tr/home/insights/2017/01/sektorel-bakis-insaat.html, 20017, s.1.
64   Zengin, Aslı Şat, "Construction Sector-Economic Research Department", Isbank, February 2018, p.12
65   TurkStat, "Periodical Gross Domestic Product," 1st Quarter: January-March 2017, Issue: 24567, June 20, 2017

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Change Ratio of GDP and Construction Economic Activity Line

Change ratio compared to the same quarter of the previous quarter
(Chain Index, 2009=100)
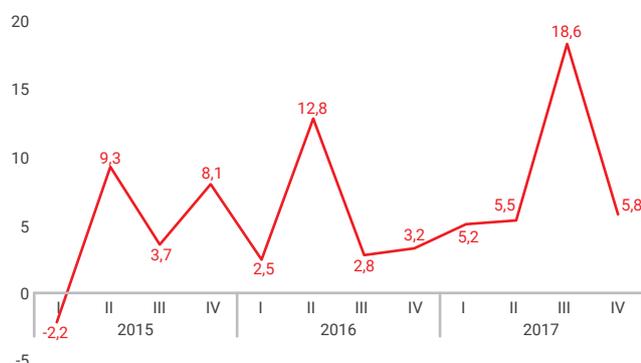
Source: TurkStat

As the construction industry is susceptible to the country's growth, it is affected by changes in the total GDP. Therefore, according to TurkStat data, the share of construction in GDP follows a fluctuating trend. However, the industry's share of GDP gained a more stable structure at current prices in the new calculation method. This ratio rose from 8.2% in 2015 to 8.6% in 2016. The construction industry's share of the GDP will most probably exceed 8% by the end of 2017 as the average ratio stands at 8.5% in the three quarters of the year. This year we see that the public sector will continue its mega projects while the private sector will undertake further construction activities.

The share of the Construction Industry in GDP at Current Prices
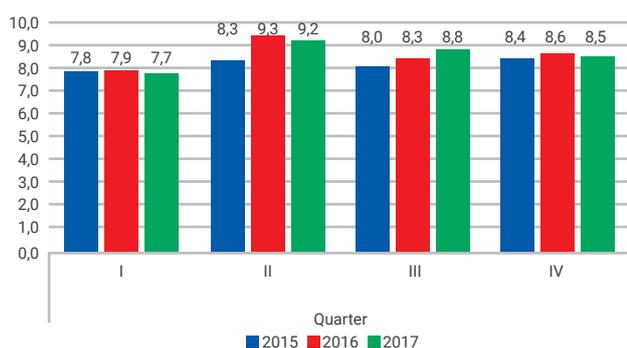
Source: TurkStat

Turkey's construction industry showed progress in parallel with the economic growth over the past 15 years. We can say that the construction industry can grow much more in an appropriate context considering the global scale and our country's potential.

The increase in household and state's final consumption expenditure has a positive impact on construction and its sub-sectors. The increase in fixed capital formation is a variable that needs to be closely monitored regarding the construction industry. In the light of this

GDP-related data, we can easily expect the industry and its components will remain bigger than a certain size throughout 2018.

While the main construction industry is crucial to property (real estate) production, the real estate industry and its components are also indispensable to the construction industry. During the past two years, a stellar performance has been put on display by the real estate activities, which are stated under the services topic in GDP economic activity accounts. In 2018, we can expect the sort of trend observed for the past two years.

GDP-Real Estate Service Operations Based on Activity Branches
(Share in GDP at Current Prices)

2015	Share in GDP (%)	2016	Share in GDP (%)	2017	Share in GDP (%)
1th Quarter	8.8	1.Quarter	8.6	1th Quarter	8,2
2nd Quarter	7,9	2.Quarter	7,9	2nd Quarter	7,4
3rd Quarter	7,2	3.Quarter	7,6	3rd Quarter	6,8
4th Quarter	7,3	4.Quarter	7,0	4th Quarter	6,5
Annual	7.7	Annual	7,7	Annual	7,2

Source: TurkStat

Investments in the construction industry are assessed as "fixed capital goods." Crucial for the health of the economy are the investments defined as fixed capital goods, which increase the growth rate as well as the amount of GDP. The abundance of investments is important for growth and development since they set in motion many sub-sectors including construction and industry.

The following supporting industries are in close interaction with the construction industry: Domestic contracting services and licensing, overseas contracting services, technical consultancy services, real estate, finance, construction and heavy equipment, and building materials industries.

The sub-sectors of the building materials industry, which is directly connected with the construction industry, include: Cement, ready-mixed concrete, prefabrication, ceramics, brick and roof tile, pumices (pumice and pumice stone), plaster, lime, gas concrete, glass, iron, steel, pipes, aluminum, wood, plastic, paint, natural stones, insulation, roofing materials, heating-cooling-air conditioning, elevators, lighting, kitchen and bathroom, and furniture.

As is evident, the construction industry needs to be followed constantly due to its substantially high multiplier effect on the economy as a whole, which could be described as a "multiplier and accelerator" in economic terms. In fact, construction industry indicators are now considered leading indicators in a macroeconomic sense and are taken into account in decision-making processes.

Nevertheless, the Construction and Real Estate Industry can be said to have a very successful year in 2017 in the light of the mentioned systemic and non-systemic risks. We saw the influence of the incentives given within the bounds of possibility of the internal and external environment on the construction industry's growth trend throughout 2017. The Turkish real estate industry is expected to maintain a positive course as of the second half of 2018 with its flexible supply structure and the continued demand buoyancy.

2.5. The Turkish Construction Industry's Impact on Employment

In general, employment is directly related to and fluctuates depending on economic growth. However, employment has not increased as much as desired in some of the countries that achieved GDP grown in recent years. In almost all of the world economies, a decline has been widely felt in the growth rate since 2013. However, the Turkish economy has gone through a successful period in increasing the employment rate, especially after the 2008 crisis. The services industry has provided the highest employment followed by the construction, manufacturing, and agriculture industries from 2005-2016..

Sectoral Shares in Total Employment (%)
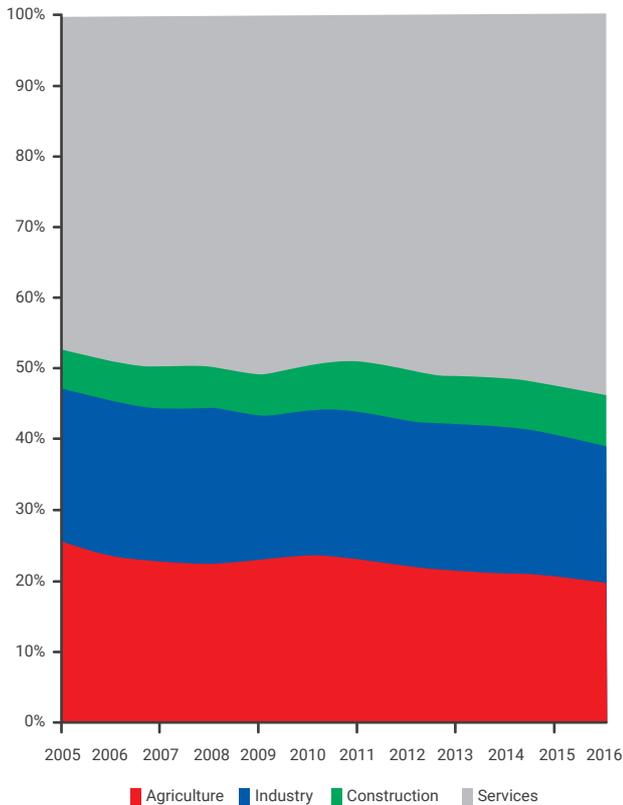
Source: TurkStat

It is a fact that the construction sector increases employment very quickly due to its multiplier effect. When the

final demand increases by TL one billion in 2002 prices, the entire economy will create jobs for nearly 48,000 people. Of this, over 60% will be allocated directly to the construction industry. Other beneficiary industries will be commerce (11%), other non-metal manufacturing industry, metal products (4.5%), agriculture (2.9%), and transportation (2.3%)[66]. It is useful to analyze employment and the interaction of industries in a holistic way. In essence, the construction industry supports creating added value and increases employment together with the industrial enterprises it sets in motion. For this reason, the industrial and the construction industries are complementary, rather than the alternative, to each other. Especially the sectors that affect each other has similar employment structures.

Contributions of Industries to Employment (% points)
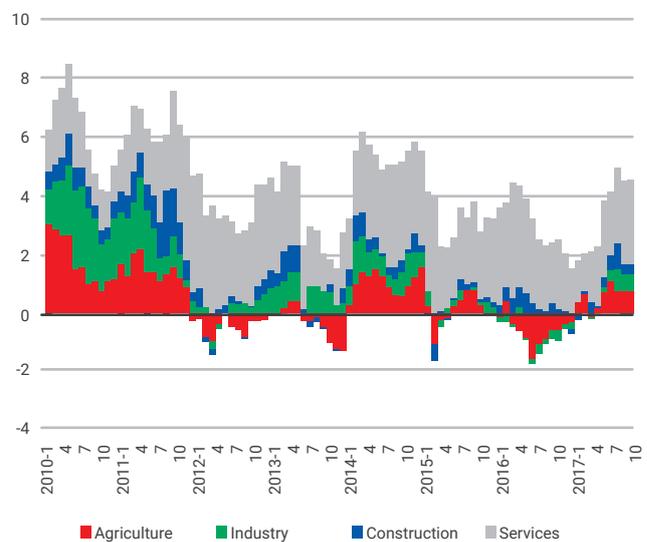
Source: TurkStat

By its nature, the construction industry is able to create jobs for people from a wide age group and educational background. The construction industry generates employment for both for white- and blue-collar workers, and it has done so more than the agriculture and industrial sectors in recent years. However, we should not overlook that the construction industry's sensitivity to growth can affect employment to the same extent.

In any case, the construction industry and the employment it creates are invaluable. In winter when seasonal effects are heavily felt, the contribution of the industry to employment may decrease. Although the construction industry has seen volatility in the last few years, the number of job opportunities it offered rose from 1 million in 2008 to approximately 2 million by 2017. A 100% increase in the past decade proves the dynamism of the industry and its importance for the economy.

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66   Daily. G. Şenesen, Kaya. T, Şenesen Ü, "Economy Magazine", Volume 2, No. 3, September 2013, p.33

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Employment in the Construction Sector
(2008-October 2015)

Construction Employment (Current level) ——— Construction Employment

Source: TurkStat Household Workforce Survey, CBRT

We should normally respond to the fluctuations in construction-related employment due to seasonal effects. However, although seasonally adjusted construction-related employment shows a trend, the rate of increases has been decreasing in recent years.

According to the data from the Construction Labor Force Input Index published by TurkStat[67], the calendar adjusted construction employment index fell by 5.7% in the fourth quarter of 2017 compared to the same quarter of the previous year, whereas it declined by 9.2% in 2017 over the previous year. Seasonally and calendar adjusted construction employment index fell by 1% compared with the previous quarter.

Construction Labor Force Input Index

Construction input indices and rates of change,
Q4: October-December, 2017 (2010=100)

Gösterge	Non adjusted	Calendar adjusted		Seasonally and calendar adjusted	
	Indeks	Indeks	Annual Chance (%)	Indeks	Quarterly Chance (%)
Employment	68,2	67,8	-5,7	66,1	-1,0
Hours Worked	65,1	64,6	-5,7	62,3	-0,8
Gross Wage-Salary	189,1	188,2	5,6	184,5	1,6

Source: TurkStat

- On the other hand, the calendar adjusted construction gross wage-salary index rose by 5.6% in the fourth quarter of 2017 compared to the same quarter of the previous year while it rose by 3.7% year on year in 2017. Seasonally and calendar-adjusted construction gross wage index rose by 1.6% compared with the previous quarter.

- The construction industry constituted 7.5% of employment on average in the last two years. Over

two million people directly generate income thanks to the industry buoyancy. However, female employment seems weak due to the structure and working conditions of the industry.

- Fluctuations in the external and internal contexts and geopolitical risks have affected the national growth throughout 2015 and 2016. As a result, we observed that overall employment level fluctuated and deteriorated. Nevertheless, the construction industry provided considerable support to employment with its vibrant structure.

Construction Industry's Employment Structure
('000 Person)

Total Number of Employees		Male		Female		Total Share of Employment (%)	
2016	2017	2016	2017	2016	2017	2016	2017
2.015	2.168	1.931	2.084	84	84	7.4	7.6

Source: TurkStat Data: March 10, 2018

The industry-specific dynamics can be understood better by analyzing the construction industry's employment characteristics and related developments. It must be kept in mind that some operations involve specific work conditions and therefore require technologically more advanced equipment and a smaller number of technical workers. On the other hand, 'certification' application that is intended to increase the skilled workforce in the industry is a development that could lead to changes in employment structure.

The reasons for the inability to ensure a quick increase in employment throughout 2017 can be cited as the completion of the ongoing projects, waiting for the second half of 2018 for new projects and focusing on the employment of fewer but efficient staff. We should note higher construction permits as of late 2017, and early 2018 could lead to an increase in construction-related employment in the following quarter.

Turnover and Production in the Turkish Construction Industry

Turnover and production indices are other critical indicators of the construction industry. They allow for the tracking of the production rate and cash flows from sales. Particularly, seasonal effects on the industry and analysis of the seasonally-adjusted situation are critical. According to TurkStat[68] data, the calendar adjusted construction revenue index rose by 12.7% in the fourth quarter of 2017 over the same quarter of the previous year while it fell by 14.2% in 2017 on an annual basis. Seasonally and calendar-adjusted construction-related revenue index fell by 0.4% compared with the previous quarter.

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67   TurkStat, "Labour Input Indices in Construction", Fourth Quarter: October-December 2017, Issue: 27854, February 28, 2018
68   TurkStat; "Construction Revenue and Production Indices", 4th Quarter: October-December, 2017, Issue: 27858, March 16, 2018

Construction Turnover Index
Construction turnover index and rates of change,
Q4: October-December 2017

Source: TurkStat

Building and Non-Building Turnover Index
The Construction Industy's Seasonally-adjusted Turnover,
(2010=100)
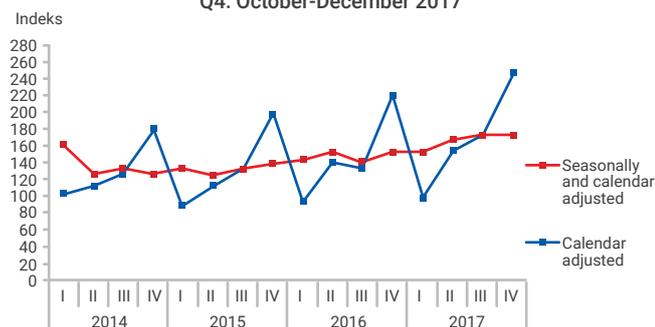
Source: TurkStat, Isbank

The seasonally and calendar-adjusted Construction Production Index[69] displayed an upward trend since the third quarter of 2014, with little impact from seasonal fluctuations. The index demonstrated a strong course throughout 2016 excluding the third quarter. Despite a slight decline in the first quarter of 2017 compared to the last quarter of 2016, the uptrend remained throughout the year.

Construction Turnover Index

	Non adjusted	Clander adjusted		Seasonally and clander-adjusted	
Inducator	Index	Index	Annual Change (%)	Index	Quarterly Change (%)
Turnover	68,2	67,8	-5,7	66,1	-1,0

Source: TurkStat

Another construction industry aspect requiring further examination is the building and non-building trend of the turnover index.

In the first quarter of 2017, the construction industry's total turnover rose by 13.7% year-on-year. In this period, turnover increased rapidly in building construction while remaining limited in non-building activities. The turnover displayed a favorable outlook in terms of building construction in the first half of the year with a strong uptick in the third quarter with 28% on the back of reinvigorating incentives and base effect for the market. The ongoing domestic infrastructure projects and partially recovering overseas construction projects after the opening of the Russian market supported non-building activities. However, turnovers had a rather fluctuating course in this group[70].

The construction industry is the driving force behind the economy due to the aforementioned reasons. It played a vital role in the Turkish economy's recovery following the 2001 crisis. However, it would be preferable to achieve a reasonable growth rate in this and other sectors, at a reasonable level of risk, for fully sustainable and permanent growth. Since the Great Depression of 1929, the countries used the construction industry and its components to come out of the crises very quickly.

The construction industry's underlying structure is healthy in our country, and it makes positive contributions to the economy. A great number of sub-components enable the industry to provide support to the manufacturing industry as well. The construction industry brings together important industries such as the cement industry and its components, iron/steel, glass, white goods, heating and cooling technologies, paint and insulation industries. As such, in today's economy, competing industries should be better replaced by innovative and growing business lines that focus on as well as improve these activities.

The buoyancy of the construction industry and the innovative efforts in the related industrial sectors have affected both the growth and the value-added production positively.

2.6. Other Factors Affecting the Real Estate and Construction Industries

This section analyzes the other factors that affect the real estate and housing industry and interprets the related data to determine future trends.

The housing industry within the real estate industry is susceptible to quantitative as well as qualitative vari-

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69   TurkStat published the production index which should be analyzed together with the turnover index. The institution made the following statement:
      "Our agency currently works on improving methods and data sources for the short-term business statistics.
70   Zengin, Aslı Şat, "Construction Sector-Economic Research Department", Isbank, February 2018, p. 14

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ables in most times and places. At times, personal (behavioral) decision-making processes can replace even mathematical values.

For that reason, especially in the pricing (appraisal) phase, influential factors are qualitatively and quantitatively vital for the housing (real estate) industry. Analyses must take into consideration factors such as the country, time and location.

Assessments should not be conducted only with investment and financial purposes regardless of the real estate type. The most important component of real estate is developments related to "humans" and "human behavior." Real estate and related rights feature among the fundamental elements of human life. In this context, population-related variables, especially demographic characteristics, need to be analyzed well.

2.6.1. Population Analysis and Its Components

Analyzing population structure and components are crucial for analyzing investment decisions and the wider economy. As for the construction industry itself, following demographic features stand out;

- Population growth rate-decline
- Population age and structure
- Migration to big cities
- Migration from big cities
- The effect of shares from factor revenues on the population's behavior and way of life
- Urbanization
- Infrastructure Activities
- Changing family structure

It should be remembered that the above factors have both economic and social effects.

Economies are directly affected by the compositional characteristics of their populations. Turkey's young and dynamic demographics appear as a positive value in the economy. Demographic characteristics are vitally important especially for consumption-based industries, and they are among the most critical elements in increasing sales in the real estate, white and brown goods industries.

It is obvious that consumption and investment trends will slow down in a world that is aging and showing a lower birth rate. Demographic factors are one of the primary reasons why the economy cannot recover adequately after the 2008 crisis, especially in continental Europe.

These characteristics have an effect on the decision-making processes of investors in the real estate industry, and Turkey's potential is remarkable in this regard.

According to TurkStat[71] verilerine göre (Şubat–2018);

- Turkey's population stood at 80,810,525 as of December 31, 2017.
- The population residing within the country increased by 995,654 year-on-year in 2017.
- Of this, 40,043,650 were men and 39,771,221 were women. Accordingly, men and women comprised 50.2% and 49.8% of the total population, respectively.
- Annual population growth rate was 1.35% and 12.4% in 2016 and 2017, respectively.
- The ratio of the city (province and district centers) dwellers increased to 92.5% in 2017 from 92.3% in 2016. The ratio of people living in towns and villages was 7.5%.
- The median age in Turkey rose from 31.4 in 2016 to 31.7 in 2017. The median age for men was 31.1 whereas it was 32.4 for women. Cities with the highest median ages were Sinop with 39.7, Balıkesir with 39.4, and Kastamonu and Edirne with 38.9. Cities with the lowest median ages were Şanlıurfa, Şırnak and Ağrı with 19.6, 20.1, and 20.9, respectively.

The population growth rate is 0.2% on average in the EU and -0.1% in Germany[72].

Turkey's Population Pyramid and Gender Ratios
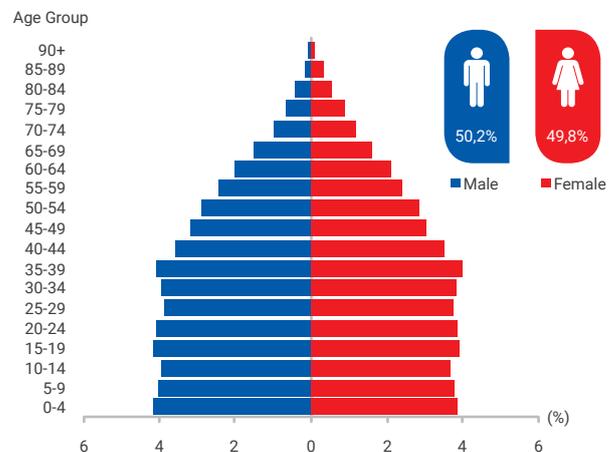
Source: TurkStat

Enjoying a young population is a driving force not only for consumption and investment but also for growth as a production factor. Analysis of age distribution in Turkey shows that a large portion of the population is in the main age group that constitutes the labor force. (15-64 age group). In addition, this age group does not only function as a driver behind employment and production but also have tremendous importance in terms of consumption .

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71   TurkStat, 'Address Based Population Registration System Results, 2017' Issue: 27587, February 1, 2018
72   Ministry of Economy, "Economic Outlook Presentation", June 2014, p. 21

In 2017, the proportion of the working-age population (ages 15-64) rose by 1.2% over the previous year. Accordingly, the ratio of the working age population appeared as 67.9%, the proportion of the child population in ages 0-14 was 23.6%, while the population aged 65 and older stood at 8.5%[73].

Although youth unemployment is quite high in Turkey, the proportion of elderly population grows gradually in parallel with better quality of life. The proportion of the elderly population (65 and over) rose from 7.5% in 2012 to 8.3% in 2016. The proportion of elderly people is 8.7% in the world. According to the MTP, Turkey's population is estimated to reach about 82,400,000 by 2020.

Turkey Population Projections (Million People)
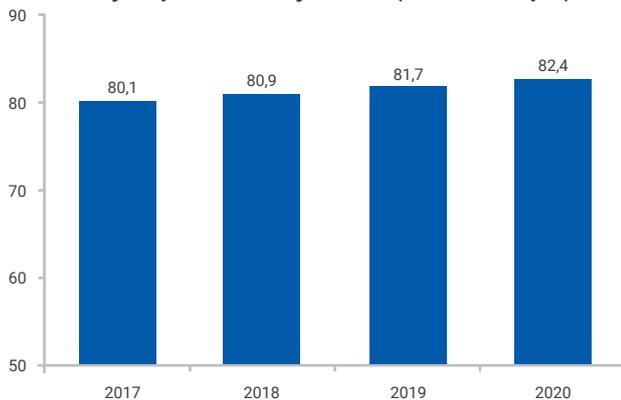
Source: Ministry of Development, 2016-2020 MTP

Changes to the Global Demographic Structure

An aging population and its effects will be one of the most debated issues regarding the world economy and social structure in the coming years. Aging global population will influence many variables including production, consumption, social services, productivity, economic growth and borrowing structure. According to a United Nations report, the number of people aged 65 and over will exceed those at 5 and under for the first time[74].

Global Population Change, People Aged Five and under and 65 and over (Percent)
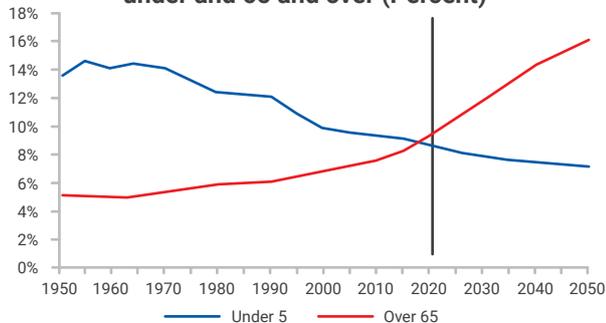
Source: UN

Decreasing child population and increasing old population will impact especially Europe, the US and western economies more negatively. Central Asia, the Middle East, and Southeast Asian countries will have a relatively younger demographic structure..

Turkey is affected considerably less from the problem of an aging population, suffered by most developed countries. Population projections by the UN show that Turkey will have the most effective demographic composition in Europe: with 56.2% of the total population included in working age by 2050.

Comparative Population Potential Projection* (2050-%)
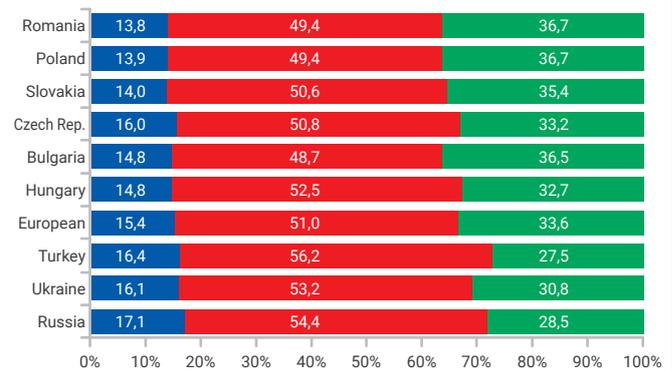
Source: UN

Urban Population in Turkey and the Migration Phenomenon

Rural to urban migration continues in Turkey. Turkey's current urbanization rate is 78%, and the corresponding population is 60 million. Rural-to-urban migration is expected to continue until 2023 with the urbanization rate exceeding 84%. Accordingly, the urbanized population is estimated to reach 71 million by 2023. Due to migration-related urbanization, housing demand is projected to continue until 2025. Urbanization causes profound differences in the population's characteristics. The employment rate is rising in cities and dropping in agricultural areas[75].

Migration to big cities is the main reason that speeds up urbanization. Big cities need fast super-structure and infrastructure investments considering migration and population growth.

The ratio of the city (province and district centers) dwellers increased to 92.5% in 2017 from 92.3% in 2016. The ratio of people living in towns and villages was 7.5%[76].

73   TurkStat, "Address Based Population Registration System Results, 2017" Issue: 27587, February 1, 2018
74   Holodny Elena,'Business Insider',18 Mayıs 2016, s.1
75   GYODER, "Main Indicators of the Real Estate Industry in Turkey", 2013, p. 24
76   TurkStat, "Address Based Population Registration System Results", 2017' Issue: 24700, February 1, 2018

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Population Increase in Major Cities[77]

Cities	Population in 2015 ('000 People)	Population in 2016 ('000 People)	Population in 2017 ('000 People)	Population Density*
Istanbul	14.657	14.804	15.029	2.892
Ankara	5.270	5.377	5.445	222
Antalya	2.288	2.329	2.364	114
Izmir	4.168	4.224	4.279	356
Bursa	2.842	2.901	2.936	282

*Population density is the number of people living in each square kilometer.

Source: TurkStat

Home to 18.6% of Turkey's population, Istanbul had the highest population with 15,029,231 people. This was followed by Ankara, Izmir, Bursa and Antalya with 5,445,026 people, 4,279,677 people, 2,936,803 people and 2,364,396 people, respectively. The city of Bayburt had the smallest population with 80,417 people.

The ratio of the Population Living in the Five Major Cities (2017)

Ankara (%6,7)
Istanbul (%18.6)
Bursa (%3,9)
Izmir (%5,2)
Antalya (%2,9)
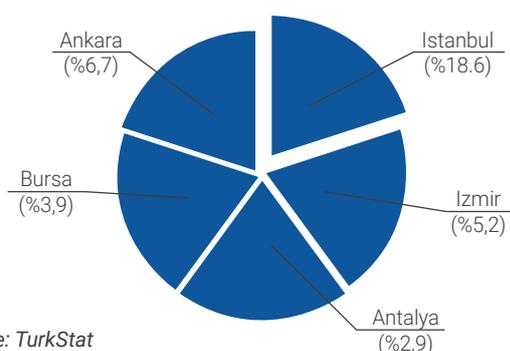
Source: TurkStat

Population growth in the first five cities seems remarkable when we look at the population projection for cities. Therefore, it is evident that the construction industry, particularly housing industry, will grow in big cities due to a natural demand increase driven by population growth in the near-term and long-term.

Population Projections for Five Big Cities

IN 2023
68 cities will have higher populations, whereas 13 will have lower populations.

16,3 MILLION ISTANBUL
6,1 MILLION ANKARA
4,6 MILLION IZMIR
3,2 MILLION BURSA
2,7 MILLION ANTALYA
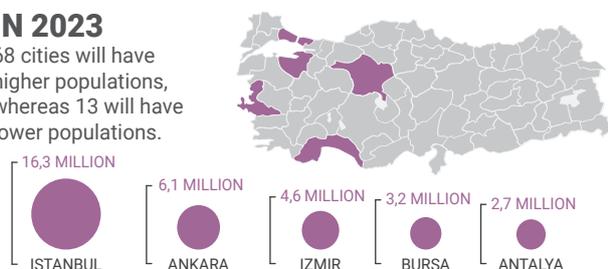
Source: TurkStat, AA

In addition to population growth, another significant variable is the concentration of the population in cities. Turkey's population per square kilometer, also known as the population density, rose by 1 from its 2016 value to 105 people in 2017.

Istanbul was the most densely populated city with a population density of 2,892 people. This was followed by Kocaeli and Izmir with 521 and 356 people. Tunceli was the least densely populated province, as in the previous year, with 11 people per square kilometer[78].

Longer-term projections reveal the possibility of crucial outcomes, particularly due to the rise in the aging population. TurkStat projects that the elderly population (65 and older) will be 8.6 million people by 2023, 19.5 million people by 2050, and 24.7 million by 2075. The ratio of the elderly population to the total population will rise to 10.2% in 2023, 20.8% in 2050, and 27.7% in 2075.

Breakdowns of Turkey's Population Projections

Turkey's population will reach arround 86.9 million and 100.3 million in 2023 and 2040, respectively.

TOTAL POPULATION		
2018	81,867,000	
2023	81,907,000	
2040	100,331,000	
2060	107,095,000	
2080	107,100,000	

POPULATION (RATE %)

	2018	2023	2040	2060	2080
65+	% 8,7	% 10,2	% 16,3	% 22,6	% 25,6
15-64	% 67,8	% 67,2	% 64,4	% 60,4	% 58,7
0-14	% 23,5	% 22,6	% 19,3	% 16,9	% 15,7
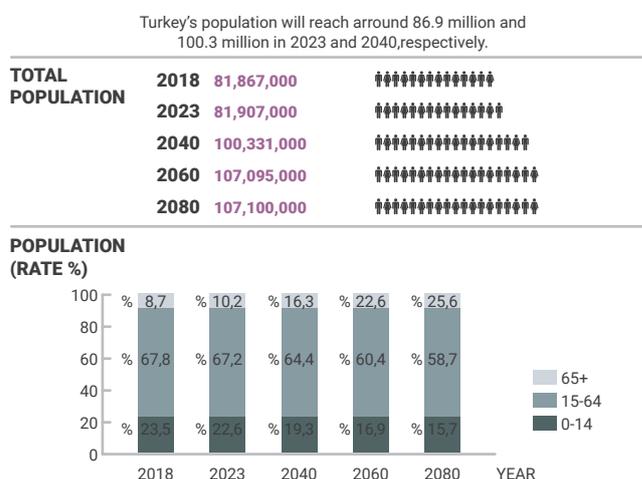
Source: TurkStat, AA

The United Nation's 2012 population projections make a comparison of population growth projections in Turkey and around the world. Accordingly, the global population stands at approximately 7.052 billion. In 2013, Turkey accounted for 1.1% of the world's population and ranked as the 18th biggest country in terms of population[79].

Longer-term projections for our country point to slowing population growth and aging population composition. In the shorter term, there will be a young population up to a certain extent (until 2023). However, it is clear that industries need to be ready for possible changes in consumption habits and trends arising from the aforementioned conditions as years go by.

Demographic structure and related movements bring with them economic changes, causing a transforma-

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77   http://www.tuik.gov.tr/HbGetirHTML.do?id=27587
78   TurkStat, "Address Based Population Registration System Results", 2017' Issue: 24700, February 1, 2018
79   IMF, 'World Economic Outlook Database',October,2013

tion from an agricultural society to an industrial and service society. The previous era of a single center and resulting urbanization has been replaced with a structure that is involved in an economic activity together with its surroundings. In the 1950s, 75% of the population lived in rural areas, whereas today, 75% live in cities. Cities account for 92% of production[80].

According to the World Bank data, since 1950, rapid urbanization and corresponding population growth have been observed in countries (Brazil, South Korea, China, India, and South Africa) that fall under the same economic category as Turkey[81].

Immigration is another issue related to population structure. This phenomenon should not be considered only in terms of domestic population movements. It receives emigrants from especially Syria and Iraq, the two distressed countries bordering Turkey, as well as Afghanistan and some African countries as they come to Turkey to live here or move to other countries. Turkey's position as an island of stability in its geography also increased external migration. Turkey has experienced demographic population movements over the last five years due to migration from other countries. Such migrations have economic as well as social aspects. As for the immigrants and refugees, the President of TGNA Sub-Commission on Refugees and the AKP Antalya Deputy Atay Uslu said: "Currently 4.3 million immigrants live in Turkey." Mr. Uslu pointed out that only 3 people had refugee status in Turkey, while the number of Iraqi, Palestinian and other international protection seekers reached 300,000[82]. This figure is increasing along with the increased turmoil in the countries along with Turkey's borders. The number of immigrants and refugees in Turkey is more than the population of 17 cities.[83]

The number of children receiving education among just Syrian migrants has reached 450,000[84].

The urbanization phenomenon in our country began to differ in terms of demographic attitudes (especially in the five big cities). In addition to families with multiple children, the number of families with a single or no child has also increased. Such attitude changes lead to necessary adjustments in many services and industries including house types, the number of rooms, white goods, energy consumption, education, health, and infrastructure services. Another interesting issue concerns the increased public spending, especially in the face of insufficient pre-planned investments due to immigration and refugee problems.

MARRIAGE-DIVORCE STATISTICS

In 2017, the number of marrying couples declined by 4.2% year on year.

	2016	NUMBER OF MARRYING COUPLES	2017	2016	NUMBER OF DIVORCING COUPLES	2017
	594,493		569,459	126,164		128,411

Avarage marriage age was 27.7 for men and 24 for women

DIVORCES BY MARRIAGE PERIOD

MARRIAGE PERIODS (YEAR)

Period	YEAR 2016	YEAR 2017
Less than one year	4.550 **3,6 %**	4.070 **3,2 %**
1-5	44.816 **35,5%**	45.647 **35,5%**
6-10	26.531 **21%**	26.599 **20,7%**
11-15	17.833 **14,2%**	26.485 **14,4%**
16-20	13.994 **11,1%**	14.229 **11,1%**
21-25	8.779 **7%**	9.131 **7,1%**
26+	9.495 **7,5%**	10.107 **7,9%**

Number of Person: 0 — 10 K — 20 K — 30 K — 40 K — 50 K

Source: TurkStat

■ YEAR 2016 ■ YEAR 2017

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80   The World Bank, 'Turkey's Transitions,' Report No. 90509-TR, December 2014, pp.158-159
81   ibid. p.160
82   Atay Uslu's statement on January 17, 2018
83   Amasya - 326,000, Artvin - 168,000, Bolu - 299,000, Burdur - 261,000, Çankırı - 183,000, Gümüşhane - 172,000, Hakkâri - 267,000, Kars - 289,000, Rize - 331,000, Sinop - 205,000, Tunceli - 86,000, Bayburt - 90,000, Bartın - 192,000, Ardahan - 98,000, Kilis - 130,000, Yalova - 241,000 and Karabük - 242,000. The total population in these cities adds up to 3.58 million.
84   http://aa.com.tr/tr/turkiye/turkiyede-ogrenim-goren-suriyeli-ogrenci-sayisi-450-bini-gecti/672207, October 25, 2016

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Marriage-divorce statistics also change the demographic structure and the related demand. According to TurkStat data[85];

- The number of marrying individuals declined by 4.2% from 594,493 in 2016 to 569,459 in 2017. Approximate marriage rate stood at 7.09 per thousand. The number of divorcing individuals rose by 1.8% from 126,164 in 2016 to 128,411 in 2017. The approximate divorce rate was 1.6 per thousand.

- In 2017, Kilis had the highest approximate marriage rate with 9.6 per thousand. This city was followed by Adıyaman and Şanlıurfa with 8.29 and 8.2 per thousand, respectively. Gümüşhane had the lowest approximate marriage rate with 4.14 per thousand. It was followed by Kastamonu and Bayburt with 5.26 and 5.39 per thousand, respectively.

- In 2017, the average age at first marriage was 27.7 for men and 24.6 for women. The age difference for first marriage between men and women first marriage was 3.1 years. Kars had the highest age difference in terms of average age at first marriage with 4.7 years. This city was followed by Ağrı and Muş with 4.4 years and 4.3 years, respectively. Zonguldak, Karabük, and Tunceli had the lowest age difference in terms of average age at first marriage with 2.4 years. These cities were followed by Kastamonu with 2.5 years.

ity shows that Syrian brides took first place with 19.4%. They were followed by Azerbaijani and German brides 13.3% and 12.4%, respectively.

- In 2017, 3,782 foreign grooms represented 0.7% of all the grooms. Their examination by nationality shows that German grooms took first place with 36.5%. They were followed by Syrian and Austrian grooms with 8,5% and 8%, respectively.

We can provide a summary of the demographic structure as follows;

- Population projections play a critical role in policy-making decisions for the future. Sounder policies can be made by establishing current population trends and projecting the composition of the population in the event of a continuation of these trends. It should be noted that population assumptions are not estimates but are rather based on a continuation of current population trends or on an analysis of the trends in countries that have undergone similar phasesr[86].

- Immigration, one of the primary factors in demographic movements, need to be analyzed in two ways. One of them is the internal immigration which flows from villages to huge cities. However, we observe immigration from five big cities to the areas with lower population. The second one

National Distribution of Foreign Brides and Grooms

- Syrians account for the highest number of foreign brides,

Number of foreign brides
20.972
(3.7% of total brides)

Syrian	4074
Azerbaijani	2790
German	2608

- Germans represented the highest number of foreign grooms,

Number of foreign grooms
3.782
(0.7% of total grooms)

1381	German
323	Syrian
302	Australian

Source: TurkStat
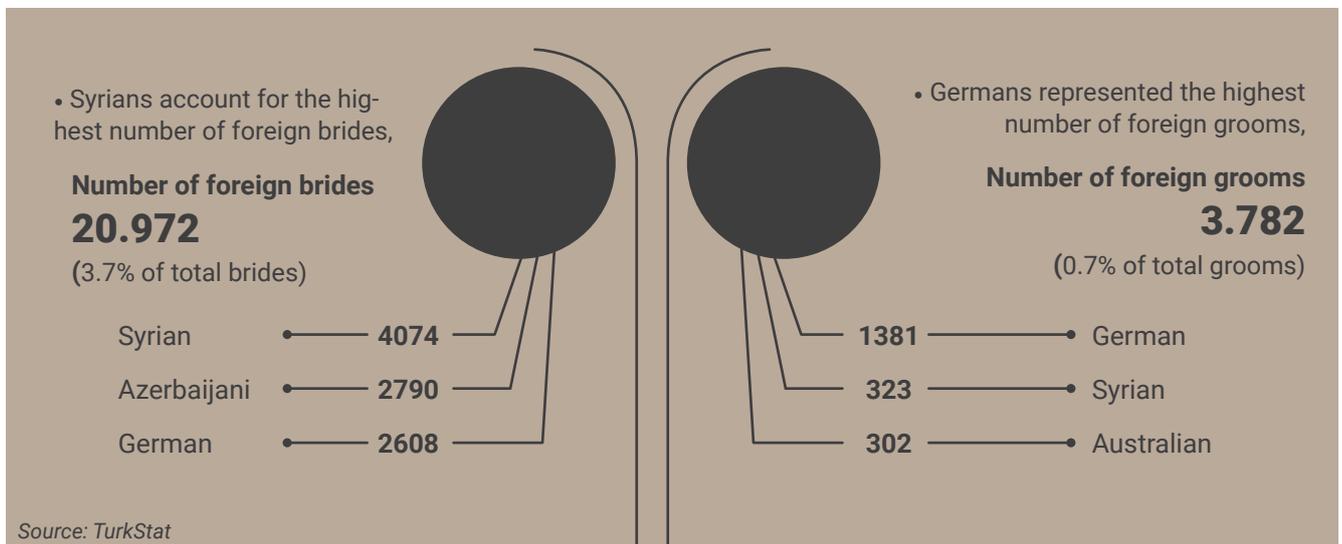
On the other hand, foreign bride and groom statistics are one of the aspects to be examined in terms of Turkey's socio-economic demographic change.

- In 2017, 20,972 foreign brides represented 3.7% of all the brides. Their examination by national-

is about the external migration, in other words, refugees coming to our country due to the internal disorder in neighboring countries. Refugees come to Turkey not only Syria and Iraq but also some African and Central Asian countries.

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85   TurkStat, "Marriage and Divorce Statistics, 2017," Issue: 27593, March 2, 2018
86   TurkStat, "Bulletin, February 14, 2013. Issue: 15844, p. 1

- Turkey's spending for the refugees reached $30 billion notwithstanding the positive contributions of this process to economic growth, i.e., home sales, white goods sales, and the development of the services industry[87].

- Public expenditures for the refugees and the amount spent by them has a rejuvenating effect on the economy. But we should not ignore their urbanization and infrastructure requirements.

- The marriage and divorce ratios, the two other demographic movements, affect many different lines of business, especially the real estate industry.

- Besides, changes to demographic elements such as the nuclear family concept or the number of people living alone affect different economic variables, especially the construction industry.

- Turkey's mean age stood at 31.7. In 2017, the proportion of the working-age population (ages 15-64) rose by 1.2% over the previous year. Accordingly, the ratio of the working age population appeared as 67.9%, the proportion of the child population in ages 0-14 was 23.6%, while the population aged 65 and older stood at 8.5%..

- One should carefully assess the potential and economic impacts of the population which has a young structure.

As covered in the previous parts, the demographic change in our country became the driving force behind the economic transformation. Qualitative and quantitative properties of the population composition not only gain importance but are also described as an asset. Therefore, better analyses of internal population dynamics and implementing long-term policies will impact both the economy and social life.

2.6.2. Socioeconomic Evaluation (Consumer Expectations and Trends)

Consumer trends and expectations must also be analyzed to make better general economic and industry-specific projections. Such analyses reflect future consumer attitudes and provide crucial information on general attitudes that will affect the economy after a certain period of time. As expectations also include many non-economic elements that change behaviors in the near future, both downward and upward fluctuations may be sharp.

Consumer confidence indices are considered a leading indicator in both the macroeconomic and industrial sense, and as such, decision-makers must keep a close eye on them.

Economic Confidence Index[88]

Economic confidence index decreased by 1.8% compared to previous month decreasing from 104.9 to 103 in February. This decrease in economic confidence index stemmed from the decreases in consumer, real sector, services, retail trade and construction confidence indices. Consumer, real sector, services, retail trade and construction confidence indices decreased to 72.3, 110.8, 100.7, 104.7 and 83.8 in February, respectively[89].

Leading Indicators-Consumer Confidence Indices
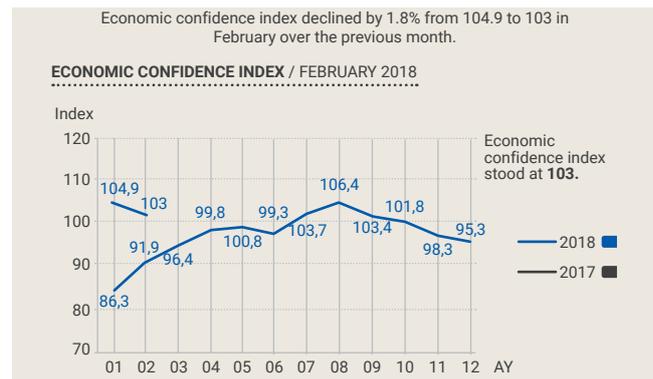
Source: TurkStat, AA

In 2017, the economic confidence index remained around the threshold value of 100. It started the year at 86.3, a low value, and then reached the peak of 106.4 in August. The most important factor affecting the low confidence index in early 2017 was the treacherous coup attempt suffered in July 2016. Then, the confidence index exceeded this early value with the influence of the measures taken. Having started 2018 in a better way than 2017, the index is above the threshold value.

Industry Confidence Index Breakdown (February 2017)
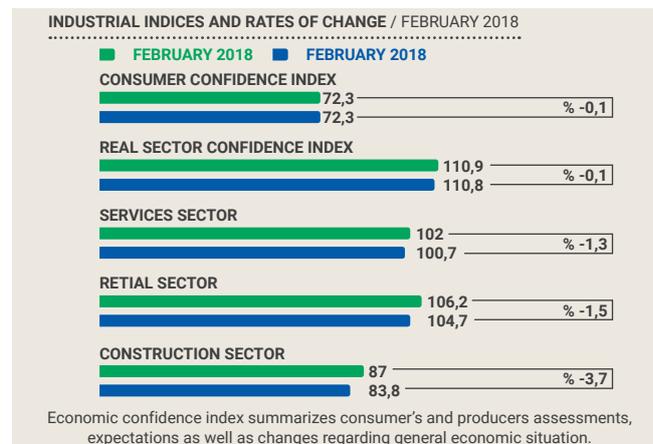
Source: TurkStat, AA

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87   According to AFAD data

88   The economic confidence index is a composite index that summarizes the evaluations, expectations, and trends of consumers and producers in the general economic situation..

89   TurkStat, "Economic Confidence Index, February 2018", Issue: 27885, February 27, 2018

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An examination of the economic confidence index on the basis of the breakdowns shows a downturn in all sub-indices compared to January 2018. Consumer confidence declined at a slow pace, while the trade sector confidence index and the construction sector confidence index declined more rapidly. Seasonal and geopolitical influences can be said to lie behind this tension in the trade and construction sectors.

Consumer Confidence Indices

The consumer confidence index[90] is one of the leading indicators to be followed in an economy. It provides guidance on issues such as spending, consumption trends, and the buoyancy of some industries. There have been many developments as covered in the above sections that make it appears below 100 bps for the last one year. The increase after July 15, 2016, after the incidents that would have been very difficult for another economy. Such increase can be actually interpreted as the presence of consumers' expenditure pattern and their desire to preserve it.

Consumer Confidence Index

Source: TurkStat

The Consumer Confidence Index, jointly calculated by the Turkish Statistical Institute and Central Bank of the Republic of Turkey based on the results of consumer trend surveys, fell by 0.1% on a monthly basis; it dropped from 72.33 in January to 72.25 in February[91].

The following aspects were observed in terms of consumer confidence index breakdowns;

- **Household financial situation expectation index stood at 91.3 points.** Household financial situation index rose by 0.2% to 91.3 in February on a monthly basis. This increase resulted from to a rise in the number of people expecting the financial situation of households to be better in the next 12 months.

- **General economic situation expectation index appeared as 96.8 points.** General economic situation expectation index rose by 0.7% from 96.1 in January to 96.8% in February. This increase resulted from a rise in the number of consumers expecting the general economic situation to be better in the next 12 months.

- **Unemployment expectation index stood at 75.3 points.** The unemployment rate expectation index dropped by 0.9% to 75.3 in February on a monthly basis. This decline resulted from a decrease in the number of unemployed people expecting the number of unemployed to fall in the next 12 months.

- **The possibility of saving index stood at 25.7 points** The possibility of saving index declined by 1.9% from 26.2 in January to 25.7% in February. This decline resulted from a decrease in the number of consumers who thinks it is possible to save in the next 12 months.

Consumer confidence index, sub-indices, and rates of change

	Index		Change of rate compared to the previous month (%)	
	01/2018	02/2018	01/2018	02/2018
Consumer confidence index	72,3	72,3	11,1	-0,1
Financial situation expectancy of households	91,1	91,3	7,3	0,2
General economic situation expectancy	96,1	96,8	9,7	0,7
Number of expected unemployment [(1)]	76,0	75,3	7,7	-0,9
Possibillity of saving	26,2	25,7	49,7	-1,9

Inquiries were condusted for the past 12 months.
(1) Higher value of the unemployment expectation index indicates lower expectation regarding the unemployed aand vice versa.

Source: TurkStat

Consumer Confidence Indices

In addition to general confidence indices, there are also sectoral confidence indices that should be considered in the analysis of the corresponding sectors.

TurkStat's sectoral confidence indices[92] provide a look at the expectations about the sector in the coming term. These indices include the retail, trading, services and construction industriesr.[93]

90   Monthly consumer trend surveys assess consumers' personal financial standings and the current state of the economy overall and measure future projections as well as determining trends in planned future spending and saving. The Consumer Confidence Index may have a value between 0-200 according to survey results. A value higher than 100 in the index indicates an optimistic outlook whereas a value lower than 100 indicates pessimistic outlook.
91   TurkStat, "Consumer Confidence Index, February 2018" Issue: 27861, February 20, 2018
92   Sectoral confidence indices may have a value between 0-200; a value above 100 indicates optimism about the current and coming term, while a value below 100 indicates pessimism. As of January 2014, sectoral confidence indices are published as seasonally-adjusted.
93   TurkStat, Sector Confidence Indices", February 2018, Issue: 27873, February 22, 2018

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Confidence Indices
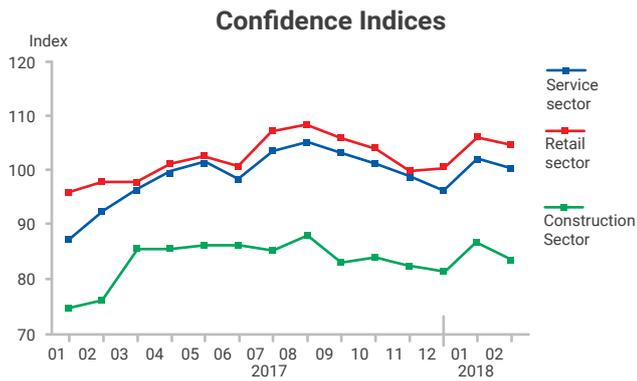
Source: TurkStat

A look at the main industries that make up the confidence index shows that;

- **Service industry confidence index stood at 100.7 points** Seasonally adjusted service industry confidence index declined by 1.3% from 102 in January to 100.7 points in February. This decrease in the service sector confidence index resulted from a lower number of executives who consider that "business environment" improved in the last three months and that "demand for services" increased.

- On the other hand, there is an increase in the number of executives who believe that the "demand for services" will surge in the next quarter. In the service industry, the State of Business and Demand for Services indices fell by 2.5% and 4.5%, respectively, whereas the expected service demand index rose by 2.8% over the previous month

- **Retail trade industry confidence index stood at 104.7 points** Seasonally adjusted retail trading industry confidence Index fell by 1.5% to 104.7 in February. The decline in the retail trading industry confidence index resulted from a lower number of enterprise executives who expected the "business volume-sales" to increase in the next three months.

There was an increase in the number of executives who thought that "business environment-sales" improved and "current good stock level" was below seasonal average in the last three-month period.

In the retail trade industry, the business volume-sales expectation index fell by 7.6% over the previous month, whereas business volume-sales and current goods stock level indices rose by 0.7% and 4%, respectively.

- **Construction industry confidence index stood at 83.8.** The seasonally adjusted construction industry confidence index declined by 3.7% to 83.8 in February down from 87 in the previous month. The decline in the Construction Industry Confidence Index resulted from the decline in the number of enterprise executives who believed that the "current level of recorded orders" were above the normal seasonal average. On the other hand, a decrease was observed in the number of enterprise executives who believe that the "total number of employees" will climb in the next quarter.

Compared to the previous month, the Current Level of Recorded Orders Index fell by 10.1%, and the Total Number of Employees Expectation Index rose by 1.3% in the construction industry.

MSeasonally Adjusted Construction Industry Confidence Index
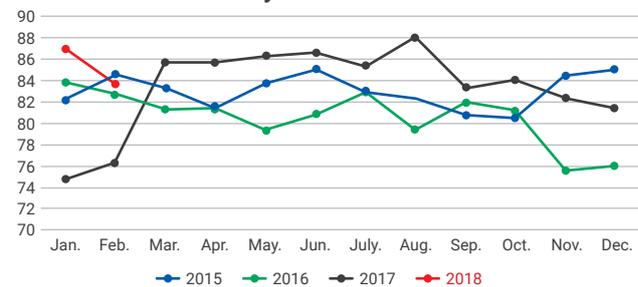
Source: TurkStat

Main Factors Limiting Activities in the Construction Industry (%)

Year	Monty	There is no limiting factor	Demand Insufficiency	Weather conditions	Labor shortage	Lack of materials and equipment	Financing problems	Other factors
2017	01	44,7	25,1	24,2	4,2	1,7	31,6	4,7
	02	41,9	25,7	26,3	3,1	1,3	30,4	5,5
	03	47,4	24,4	17,7	3,2	1,5	27,7	4,8
	04	53,2	24,6	10,2	4,6	2,4	25,8	5,3
	05	55,0	22,0	6,8	3,4	1,4	25,8	4,4
	06	55,8	23,7	4,6	5,4	3,3	26,2	4,1
	07	57,9	22,1	1,4	4,4	3,2	26,0	4,4
	08	60,2	21,9	1,6	4,9	3,1	25,6	3,4
	09	56,7	22,0	1,7	5,1	2,8	26,9	4,9
	10	55,8	20,8	3,8	4,6	3,4	28,3	4,9
	11	53,8	21,9	6,0	5,2	2,7	29,6	3,9
	12	51,5	23,9	9,5	4,0	3,4	31,4	2,6
2018	01	51,0	18,6	13,1	5,4	3,0	28,6	6,4
	02	47,7	20,9	16,4	5,3	1,7	28,5	5,6

Source: TurkStat

The trade and services indices remained above base values after the first quarter of 2017 despite the fluctuating course of the confidence index. The construction sector, on the other hand, followed a weaker course in parallel with higher, imbalances between demand and supply and rising costs.

The declines in the confidence indices are largely related to expectations and psychological factors, but the recovery will accelerate with lower risk expectations. The improvement in the retail and services sector confidence indices will also have an impact in the construction industry after a while.

Factors limiting activities are among the most important factors begging special examination in the construction industry. The construction industry can be more buoyant if such negative factors can be reduced.

The data show that the most important aspect is the lack of a factor limiting activities between 2017 and the end of February 2018. However, this situation is primarily due to financial problems and demand insufficiency. As the various expectation indices emphasize above, the industry's most crucial issue is financial both in terms of supply and demand. The main problem at this point is the high-interest rates, maturity structure, and accessibility. On the other hand, demand insufficiency may vary due to periodical effects, expectations and economic impacts.

The past or planned campaigns of the leading industry organizations, especially Emlak Konut REIC, GYODER and other branded housing producers will have a positive impact on both inadequate demand and financing problems. On the other hand, the effects of other measures planned by the government will be seen in the coming period.

2.6.3. Housing Industry's Demand-Supply Structure - Price/Sales Valuation

Developments in the construction industry, and by extension, the housing sector, are variables of daily life for both the economic environment and for simple citizens. Housing (shelter) is a basic need, after such physiological needs as breathing and drinking water. Thus, a house is not only an economic value but also a type of asset with socio-psychological characteristics.

In a general sense, the concept of "real estate and related rights" carry a very broad meaning in the legal sense.

Real estates are fixed items that cannot be moved from one place to another. Its definition also lists the items that can be considered real estate. The general legal description applies to units in the land and property ownership register. Both independent and permanent rights are included in the real estate, despite their not fitting this description. Furthermore, at times, the rights could be more valuable than the real estate itself[94].

For that reason, in some classifications, the rights are included in the real estate. However, the notion of rights cannot be limited only to those with a title deed registry record. In other words, 'rights' can be described as a real estate, land, or building that has been built on the land in question. Real estate is a material thing that can be seen or touched, with all its extensions, on, above, or under the ground[95].

Moving from a wider description of real estate to a more specific one of the housing; even though "housing" has its own dynamics, it can also be said to have basic property characteristics and composition.

The price of a home in the housing sector is determined by the balance of housing supply and demand. In the short term, the supply of housing is for the most part fixed, meaning that the main variable in determining housing prices is the rise or decline in demand. Consequently, in the short term, rising demand for housing causes prices to increase and declining demand causes them to fall[96].

Housing and related interests make up a significant portion of the construction industry in our country. The industry's growth rate is influenced by booms/stagnation observed in housing demand and sales. The industry's sensitivity to the total national growth is also high.

The flexibility of the construction industry to housing demand is quite rigid in the short run. However, the administrative characteristics of the Turkish construction industry make an attempt to stabilize supply by exhibiting an elastic structure. This characteristic is more visible in corporate companies.

Construction Industry's Growth Rate
(compared to the previous quarter-current prices-%)

I	II	III	IV	I	II	III	IV	I	II	III
2015				2016				2017		

Values: 5,0 · 17,2 · 14,9 · 21,8 · 13,9 · 26,5 · 9,5 · 18,7 · 13,4 · 14,0 · 29,4
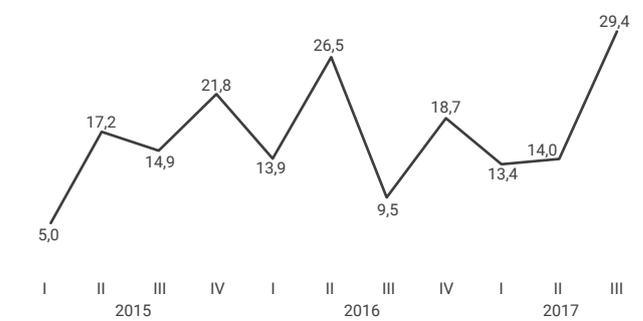
Source: TurkStat

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94   We perform an analysis on the "housing" sector in terms of real estates given the nature of our report. Therefore, other construction industry components are not included in this part of our review.

95   Karapınar Aydın, Bayırlı Rıdvan, Bal Hasan, Altay Adem, Bal Emine, Torun Salih, Gayrimenkul Değerleme Uzmanlığı, 4th Edition, Gazi Kitapevi, 2007, Ankara, p. 4

96   Kaya, Aslı, "Determining of The Factors Affects Housing Price in Turkey with Hedonic Price Model ", CBRT Expertise Qualification Thesis-Unpublished, Ankara, 2012, p.150

According to TurkStat data, the construction industry grew by 15.1% (at current prices) on average in 2015. The growth rate, calculated with the same method, was 17.2% in 2016. Although the growth momentum slowed slightly in the first quarter of 2017, the industry made a recovery in the second and third quarters achieving 18.9% growth rate on average in the three quarters. The construction industry's share in GDP was 8.2% and 8.6% in 2015 and 2016, respectively. In the first nine months of 2017, the average rate was 8.5%[97].

In particular, the industry recovered quite rapidly with the help of campaigns and tax incentives in the last quarter of 2016 completing the year with the sales of 1,341,413 new houses. In 2017, housing sales increased by 5.1% to 1,409,314[98].

Examining the construction permits and occupancy licenses would be appropriate to analyze the flexibility of construction and real estate industries according to demand and economic conditions. This group of date is extremely important to understand supply developments and see supply change in terms of demand and growth direction.

Construction Licenses and Occupancy Permits

Looking at the two-year trends in building use and construction permits can show more clearly the reactions in the industry's growth, demand, and supply structures.

vious year. The flexible supply structure of the Turkish construction industry chose to balance the production as of 2016.

In January-December 2017, the rate of increase showed a serious recovery in terms of the number of buildings, surface area, value and number of units. The uncertainty coming with a deteriorated risk perception due to the treacherous coup attempt in 2016 eliminated very quickly in 2017. The construction industry opted for a quite rapid increase in licenses to meet possible deferred demand.

A slower rate of increase in the number of real estate licenses in 2018 than 2017 should be considered normal. We see significant concentrations in region-based new construction licenses mainly due to urban transformation. This situation causes pricing imbalances by disrupting supply structure following the completion of construction. On the other hand, it leads to different consequences such as traffic congestion and environmental effects. Thus, the new licensing process of the municipalities may be subject to certain restrictions.

The course of the above situation reminds us of the Cobweb[99] theory in essence. Supply adjusts itself according to the demand with delay by increasing or narrowing the production exceedingly in an effort to establish a balance. In theory, it is possible to see situations called stable, unstable and neutral balance. The increase in individuals' incomes or the expectation

Construction License Details (2015-2017)

Construction Licance, January-December 2015-2017

Indicators	Year			Rate of change compared to the previous year (%)	
	2017	2016 (r)	2015 (r)	2017	2016
Number of buildings	155.148	133.461	125.741	16,2	6,1
Surface area (sqm)	270.740.538	205.437.099	189.674.525	31,8	8,3
Value (TRY)	293.501.364.777	187.132.149.771	160.566.234.008	56,8	16,5
Number of flats	1.323.118	1.000.368	897.230	32,3	11,5

(r) 2015 and 2016 data were updated for the occupancy permits statistics.

Source: TurkStat

We see a year-on-year decline in construction occupancy and construction licenses between January and December 2015. We can interpret that the supply side intends to protect itself against various risks, and achieve balance and cost control based on rational consumer behavior.

The period January-December 2016 saw balanced increases in the number of buildings, surface area, monetary value and number of units compared to the pre-

that the real estate prices will increase in the future as well as supply side activities such as interest rates and campaigns can also stimulate demand.

The real estate price and supply movements in our country seem to have resulted from the above three factors in recent years. However, the importance and weight of these elements vary according to the relevant economic conditions. The period from end-2016

97   TurkStat, 'Periodical Gross Domestic Product," 1st Quarter: January-March, 2017 ', Issue: 24567, June 12, 2017 and TurkStat, "Periodical Gross Domestic Product, 3rd Quarter: July-September, 2017', Issue: 24569, December 111, 2017

98   TurkStat, "Home Sales Statistics, December 2016" Issue: 24792, January 24, 2017 and TurkStat, "Housing Sales Statistics, December 2017" Issue: 27781, January 19, 2018

99   Cobweb Theorem: It is based on the assumption that price changes cause an immediate reaction to supply and demand quantities.

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to the present day reminds us of a search for a kind of 'stimulated balance.' For a sustainable and stable demand, the scale needs to grow in a macroeconomic dimension together with an income increase. On the other hand, access to funds and ease of cost will also support this process in the short term. We see that demand maintained its vitality in 2017. However, a more selective and cautious appetite for housing may be expected to continue in 2018. The number, surface area, value and unit number of buildings with construction permit from municipalities rose year on year by 16.2%, 31.8%, 56.8%, and 32.3%, respectively in 2017. As for the permits given in the January-December 2017, the buildings had a total surface area of 270.7 million square meters. Of this, housing, non-housing, and shared areas accounted for 151.5 million, 59.7 million and 59.5 million square meters, respectively[100]. The following results stand out in the analysis of buildings that obtained construction licenses from January-December 2017;

- In terms of usage purpose, residential buildings with two or more units took the biggest share with 208 million square meters. This was followed by public entertainment, education, hospital or care institution buildings with a value of 15.3 million square meters.

- In terms of building ownership, the private sector took the biggest share with 228 million square meters. It was followed by the public sector and building cooperatives with 37.2 million 5.5 million square meters, respectively.

- As for 1,323,118 flats, the private sector, the public sector, and building cooperatives accounted for 1,221,846 and 83,762 and 17,510 units, respectively.

- Istanbul had the largest share with 49.6 million square meters based on the total surface area of the buildings. Istanbul was followed by Ankara with 28.9 million square meters and Bursa with 15.2 million square meters. Şırnak, Muş, and Kilist turned out to be the cities with the smallest square-meter area.

Construction Licenses in Istanbul-Ankara-Izmir
(January-December 2016/2017)
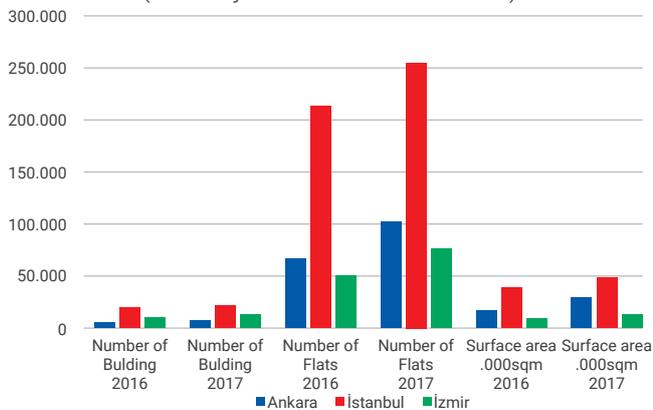
Kaynak: TÜİK

- Istanbul also had the lion's share according to the number of apartments with 254,598 units. Istanbul was followed by Ankara and Izmir with 101,840 and 76,029 units, respectively. Bayburt, Muş, and Kilis had the lowest number of units, respectively.

The three largest cities in the real estate industry (Istanbul, Ankara, Izmir) indicates both the market trends and behaviors of decision-makers. Therefore, the figures from these cities matter for analysis. Istanbul has a remarkable superiority among three big cities in terms of building permit types.

Changes in Occupancy Permits

Occupancy permits indicate the suitability of constructions for settlement in line with the pre-determined conditions after completion. Following is a summary of the 2017 changes to occupancy permits.

In 2017, the number building obtaining occupancy permits from municipalities declined year on year by 1.7%, whereas the surface area, value, and the number of units rose by 6.6%, 28.2%, and 8.9%, respectively. The following results stand out in the analysis of buildings that obtained building use permit from January-December 2017[101];

- The total area of the buildings was 161.1 million square meters. Of this, 94.2 million, 35.7 million and 31.2 million square meters were accounted for by housing, non-housing, and shared areas.

- In terms of usage purpose, residential buildings with two or more units took the biggest share with 121.3 million square meters. This was followed by wholesale and retail trade buildings with 8.4 million square meters.

- In terms of building ownership, the private sector took the biggest share with 138.9 million square meters.

- It was followed by the public sector and building cooperatives with 18 million 4.2 million square meters, respectively. As for the number of flats, the private sector accounted for 756,207 of the total 820,526 units, the public sector for 45,633 units, and building cooperatives for 18,686 units.

- Istanbul had the largest share with 28.2 million square meters based on the total surface area of the buildings. Istanbul was followed by Ankara with 16.1 million square meters and Izmir with 8.9 million square meters. Şırnak, Hakkari, and Ardahan had the smallest square-meter area.

- Istanbul also had the lion's share according to the number of apartments with 160,471 units. Istanbul was followed by Ankara and Izmir with 67,275 and 49,844 units, respectively. Şırnak, Hakkari, and Bitlis had the lowest number of units.

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100   TurkStat, "Construction License Statistics, January-December, 2017" Issue: 27753, February 19, 2018
101   ibid, p. 1

Occupancy Permits (2015-2017)

Construction Licanse, January December 2015-2017

Indicators	Year			Rate of change compared to the previous year (%)	
	2017	2016 (r)	2015 (r)	2017	2016
Number of buildings	116.767	118.728	110.204	-1,7	7,7
Surface area (sqm)	161.119.235	151.127.619	143.105.650	6,6	5,6
Value (TRY)	175.925.618.886	137.273.419.877	119.593.198.739	28,2	14,8
Number of flats	820.526	753.426	732.948	8,9	2,8

(r) 2015 and 2016 data were updated for the occupancy permits statistics.

Source: TurkStat

In 2017, the most significant change in Occupancy Permits was the increase in three types of measurement: surface area, value, number of units. Although 'building residence permit' followed a negative course in 2017 in terms of the number of buildings, the most significant rise was seen in 'value' increase.

Building License Statistics (Total Number of Units)

Source: TurkStat

quake-resistant structures especially in big cities. Furthermore, the practice provides certain conveniences regionally through regulations aiming to replace all faulty buildings with new ones throughout Turkey, particularly in the risky parts of Istanbul.

Building License Statistics (Total Surface Area)
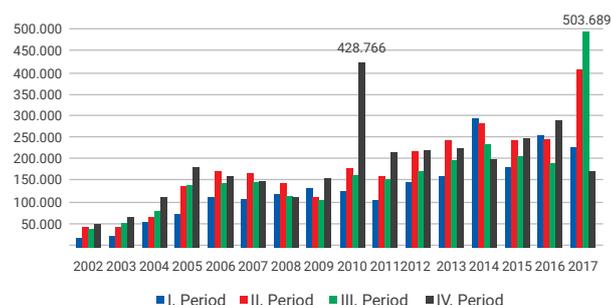
Source: TurkStat

It can easily be predicted that a more balanced and market mechanism-based marketplace will develop in construction licenses and occupancy permits in time. Nevertheless, this balance may be subject to occasional fluctuations, depending on economic and demographic variables.

Another point to keep in mind is that the terms "construction license" and "occupancy permit" differ in terms of process and structure. If the building completion period is considered to be an average of two years after the construction license is obtained, the difference arises due to the houses that are currently being built but have yet to obtain their occupancy permits.

One of the most important factors that can affect construction licenses, occupancy permits, and by extension, home sales (inventories) is the Law on Transformation of Areas Under Disaster Risk, which entered into force after being published in the Official Gazette No. 28309 dated May 31, 2012. The practice is known as the "law on urban transformation or on transformation against the risk of earthquakes" and has made it possible to tear down and transform risky buildings with occupancy permits into earth-

Purpose of Use according to Occupancy Permits, Residential Units
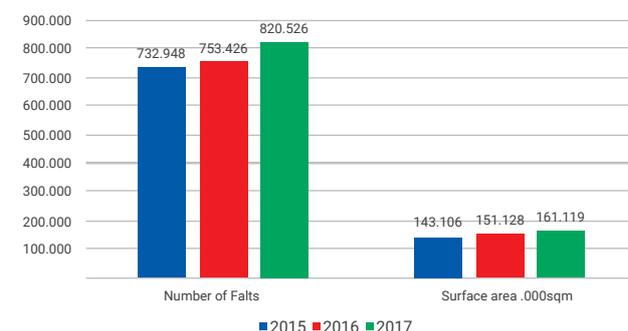
Source: TurkStat

Under urban transformation, homeowners agreed with many contractors to receive new apartments in exchange for their old ones. Previously inhabited, these buildings lead to a ready "owners" since occupancy permits need to be obtained once more after the construction permits required in the rebuilding process. One should not overlook that residential buildings reconstructed due to urban transformation will not increase inventory.

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A closer look at construction licenses and permits in recent years show there have been more construction licenses than occupancy permits for the past decade;

- The most important reason is the effort to keep up with the increasing demand structure from 2007-2014.

- From 2015, we can see the influence of the ongoing projects with particular sizes and the concentration of the urban transformation projects on building permits. An increase was seen in the number of construction licenses for these reasons.

- City and district-based increases in construction permits also cause supply-side price imbalances. For this reason, limiting construction permits to certain regions will not only provide a supply-side balance but also reduce the traffic and environmental inconvenience caused by simultaneous urban transformation projects.

Three Major Cities - Construction Licenses and Occupancy Permits
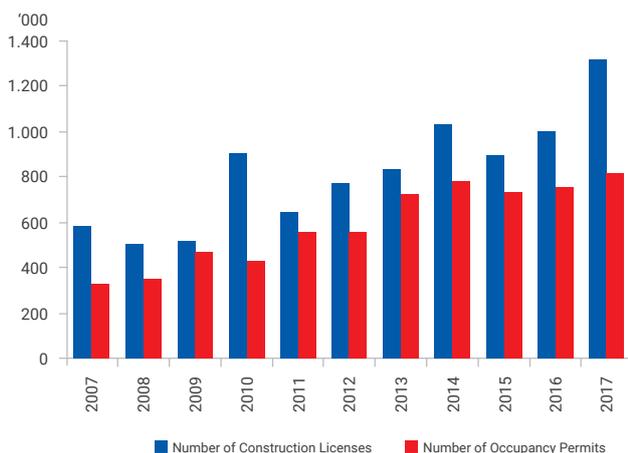
Source: TurkStat, Isbank

- Construction permits followed a similar pattern to the increase in construction licenses. It is normal that there is a certain difference between construction licenses and construction permits. A certain excess should be considered normal because supply responds to demand with a delay in structural terms.

- We see the influence of higher sales in the past five-year period on construction licenses and permits. Having broken records for five years in a row, sales started to slow down.

- It seems likely that contractors will reduce the number of construction licenses. Price and cost developments have slightly reduced the risk appetite of contractors.

An examination of construction licenses and construction permits in the three major cities shows a situation similar to Turkey in general.

- Istanbul has taken the lead both in terms of construction licenses and occupancy permits in the last three years. Istanbul is followed by Ankara and Izmir.

- The increase in construction licenses in Istanbul is quite striking in 2017. The increases in building permits and occupancy permits in Ankara and İzmir accelerated significantly in 2017.

Construction Licenses and Occupancy Permits (2007-2017)
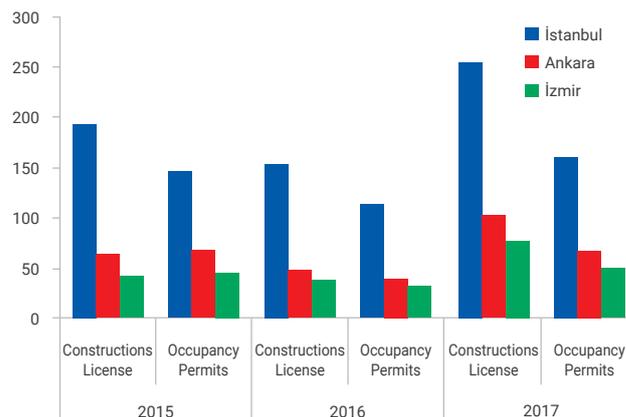
Source: TurkStat, Isbank

- By the end of 2017, the total number of licenses received on three big cities was almost 1.5 times the number of occupancy permits. Compared to 2016, the difference between the number of construction licenses and the number of occupancy permits in this period rose 2.5 times, 4 times and 5 times in Istanbul, Ankara, and İzmir, respectively.

- As of 2018, the rate of increase in construction licenses may slow down. Occupancy permits, on the other hand, may increase in parallel with the completion of buildings.

2.6.4. Construction Costs

Another variable for the housing sector is fluctuations in construction costs and the resulting effect on supply prices. As in every industry, rising costs not only limit profit margins but also affect projections and investments decisions.

Changes in the main input prices should be closely monitored especially in the construction industry and related sub-industries. Interest rates rising along with increasing foreign exchange rates were the most important factor affecting construction costs throughout 2014. Labor costs have also contributed to the rise. Although foreign exchange and interest rate-related factors influenced costs in 2015 labor costs also reached a considerable level.

Costs followed a reasonable course in the first half of 2016. However, the impact of the coup attempt tak-

ing place in the third quarter and increase in the exchange rates due to higher geopolitical risks affected the input costs negatively. The cost increase in the material index in the last quarter was reflected in prices, which increased the construction industry's costs. However, the effect of cost increases was restrained due to falling loan rates, and measures were taken for the industry.

The rate of increase in material prices seems to have exceeded the labor cost in 2017. In particular, the cost increases in FX-based iron and construction inputs resulted in higher material prices together with the demands of contractors. The high use of energy and similar raw materials in construction inputs has kept D-PPI-related cost increases on the agenda.

According to TurkStat data[102] the building construction cost index (BCCI) rose in the fourth quarter of 2017 by 6.5%, 22.8%, and 19.7% on a quarterly basis, year-on-year basis, and based on the averages of four quarters, respectively.

In the fourth quarter of 2017, the labor index and material cost index rose by 1.8% and 7.9% on a quarterly basis in BIME (Building Construction Cost Index). The labor and material indices rose by 13.7% and 25.6%, respectively, compared to the same quarter of the previous year.

Building Construction Cost Index
(2005=100)
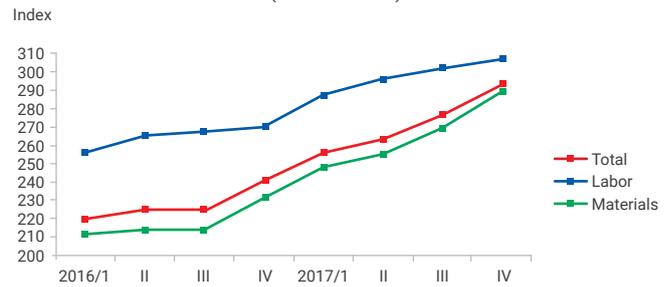
Source: TurkStat

On the other hand, the input shares of the April-June building construction cost index are as follows[103];

General building materials, labor, and equipment materials make up the ranking. Explained in terms of cost classification, these three aspects can be seen as the most important input.

Building Construction Cost Index Input Shares
(October-December 2017)

Source: TurkStat

Building Construction Cost Index Change Ratios
IV. Quarter: October-December, 2017 [2005=100]

	Q4 2016			Q4 2017		
	Total	Labor	Materials	Total	Labor	Materials
Quarterly change rate	5,9	1,1	7,5	6,5	1,8	7,9
Change rate compared to the same quarter of the previous year	12,4	10,6	12,9	22,8	13,7	25,6
Change rate according to four quarter averages	7,7	10,6	6,9	19,7	12,7	21,9

Source: TurkStat

Having fallen in the last quarter of 2016, the labor costs resumed its growth throughout 2017. The labor costs have been rising since the third quarter of 2016 although the rate of increase slowed down in the second quarter of 2017. However, cost increases have a quite a rapid course.

Producers, who increased the sales price gradually sacrificing on their profit margins despite the increased input costs in 2014, seem to have compensated for these losses with the moderate input price trend in 2015. However, increased input costs in 2016 began to put pressure on sales prices.

Producers seem to have achieved sales mostly without reflecting their costs to consumers throughout 2017. Price declines in real terms lowered profit margins quite considerably. However, the rise in the D-PPI index and the industry's shouldering cost increase for a long while will be a factor increasing the prices after a certain period.

Interest Rate-Income Effect on Construction and Housing Industries

As a macroeconomic variable, interest may be named briefly as 'cost or rent of money.' Interest may be influenced by many factors, including risk premium, external and internal general conditions, inflation and expectations. It is important for both investors and consumers, as it is related to loan borrowed from those with want of funds from those with funds surplus.

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102   TurkStat, "Building Construction Cost Index, 4th Quarter: October-December, 2017, Issue: 30566,January 19, 2018
103   ibid. p. 1

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The real estate industry in Turkey continues to perform the task of providing housing at certain standards as well as functioning as an investment tool. Bank loans and related interest rates are the crucial external sources that enable home purchases with a certain maturity date.

The interest variable is a factor that affects the resource costs of construction companies by creating as much, or even more, demand fluctuations as it does in all sectors. This variable is critical in terms of sales and related parameters.

Following the 2001 crisis, a rapid decline in interest rates led to significant demand growth and brought down operating costs. Changes in mortgage rates determine the demand for housing purchases: for example, a drop in mortgage rates would spur demand. A positive relationship exists between mortgage rates, house ownership growth rate, and the number of homes sold[104]. The decline in housing loans increases housing sales to a reasonable extent.

A growth trend was experienced in parallel with the Fed announcements and rising domestic risk perception. This followed the May 2002-2013 period, in which both real and nominal interest rates plummeted in Turkey. This caused interest rates for loans and all other types of interest rates to increase (in TRY). Interest rate growth continued as a result of the CBRT's intervention in foreign currency and interest rate markets, due to foreign currency outflows and other increased risk perceptions at the beginning of 2014. Interest rates, shaped both by the CBRT and the market, recorded some decline until the first half of 2015. The government sought to implement policies supporting growth in early 2016. However, it has not reached the desired targets in interest rates and risk premiums due to treacherous coup attempt on July 15 and geopolitical risks. The growth rate of 2016 and general economic conditions did not fare poorly despite these developments. The credit growth continued to increase in the first half of 2017 thanks to macro-prudential policies supporting the financial system and the government's financial measures and incentives. The ratio of net borrowing to GDP, an important indicator of financial stability summarizing the loan growth's relationship with economic activity and aggregate demand, rose to 8.7% in the second quarter of the year[105]. As of the end of 2017, the rate was around this level.

The Financial Conditions Index (FCI), which is a consolidated indicator of all these developments, points to the fact that financial conditions support the revival in economic activity, albeit to a limited extent, throughout the year 2017[106].

Financial Conditions Index and Credit Growth
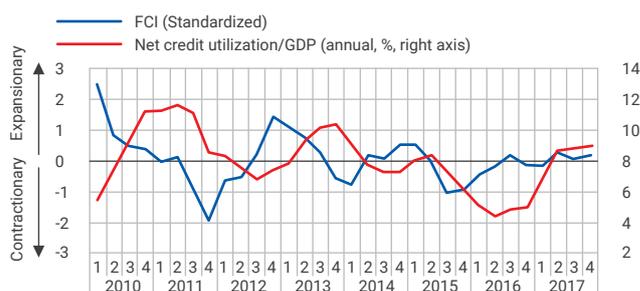
Source: CBRT

Turkey differentiated from other developing countries slightly in terms of exchange rates, risk premiums, stock returns, market interest rates and portfolio flows with the impact of movements in global risk appetite and geopolitical developments at the beginning of the last quarter of 2017. All financial indicators started to improve as of late November due to the global risk appetite, lower market volatility and the measures taken by the CBRT. Although commercial loans suffered some momentum loss starting with mid-2017, the credit appetite of banks remained in place in the last quarter of the year thanks to the positive economic outlook. According to the Loan Tendency Survey, banks did not make significant changes to the credit standards they imposed on businesses based on their expectations for the last quarter of 2017 and the first quarter of 2018[107]. As of the first half of 2017, the policymakers used economics-finance policies (Credit Guarantee Fund) to ensure macro balances and reach a particular growth potential. On the other hand, the CBRT deployed tight monetary policy and implicit interest hike tools. These deployed tools have produced very positive results on growth. However, interest costs are far from the desired level.

Changes in Consumer Loans
(Trend Data, Annual Interest, 4-Week Moving Average,%)
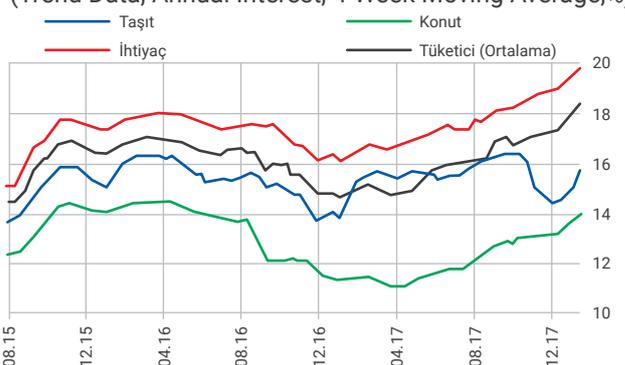
Source: CBRT

An examination of changes in consumer loans shows a rise in housing loans from the end of 2015 to the

104   Kaya, Aslı, 'Determining of The Factors Affects Housing Price in Turkey with Hedonic Price Model',
         CBRT Qualification Thesis-Unpublished, Ankara, 2012, p.16
105   CBRT, "Inflation Report-2017-III" Ankara, August 2017, p. 57
106   CBRT "Inflation Report-2018-I, Ankara, January 2018, p. 55
107   ibid, p. 55

first half of 2016. Then, the demand for housing loans dropped until the October of 2016 as in the case of all loan types due to the impact of the coup attempt. After October, the number of loans, especially housing ones, started to increase due to the rapid normalization of the economy and incentives. Another reason for the buoyancy in housing loans in the first half of 2017 is lower housing loan interest rates granted by the public banks. In particular, Ziraat Bank took the lead in this type of loans. This was seen in the higher rate of housing sales with loans.

Following is a summary of the changes regarding the institutions supplying loans and the market since the publication of our last report in April 2017;

The banks continued to grant loans in the second quarter thanks to the favorable economic growth outlook and public loan guarantee support. We saw a moderate uptrend in consumer loans and commercial mortgage interest rates since the beginning of 2017. We saw a limited increase in housing and interest loan interest rates and a horizontal trend in vehicle loan interest rates as part of the subcategories of consumer loans. As of July 21, 2017, average consumer and commercial loan interest rates were recorded as 16% and 16.4%, respectively[108].

On the other hand, housing loan interest rates underwent a downtrend from the second quarter of 2016 and an uptrend since March 2017. As of June 2017, the monthly and compound interest rates on housing loans stood at 0.93% and 11.78%, respectively. The 120-month housing loan rates provided by banks fluctuate between 0.99% and 1.29% in the third quarter of 2017. These ratios indicate a rise compared to the previous quarter. The housing loan interest rates reached the highest level in December 2017.

Housing Loan Interest Rates
(Monthly and Annual Compound)
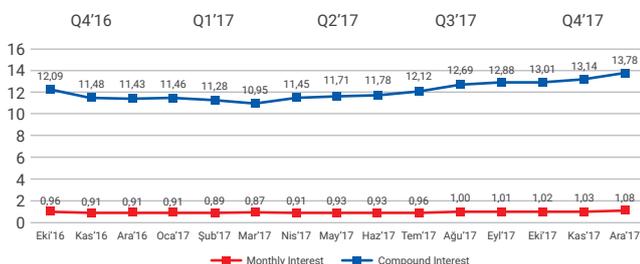
Source: CBRT and GYODER

The main reason for higher housing loan interest rates is that the banks pass on higher funding costs to their loans.

Surging in the second quarter of 2017, the deposit interest rates are close to the bank's non-deposit TRY funding costs. The deposit interest rates have climbed up by an average of 127 basis points since the beginning of the year, while the CBRT's weighted average funding cost has increased by 15 basis points. The exchange rate interest rates were close to horizontal[109].

Banks' non-deposit TRY funding costs increased on a limited scale in the fourth quarter of 2017. The interest paid on TL deposits, which is the banking industry's most important financing source with maturities being predominantly shorter than three months, was close to the CBRT's weighted average funding cost. In this period, exchange rate interest rates were generally higher than other funding costs, but they have recently converged close to the CBRT's weighted average interest rater[110].

Bank Funding Cost Indicators
(4-Week Average, %)
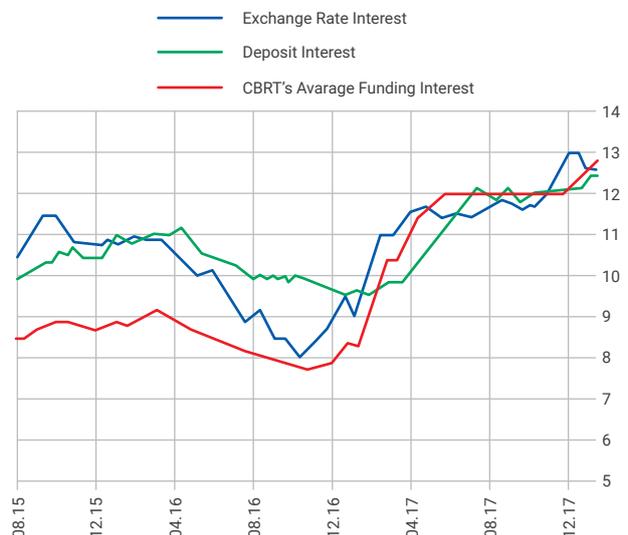
Source: CBRT, BIST

Another problem for banks concerns the increase in the interest rates of deposits, the most important source of financing, which has a maturity shorter than three months. Increases in deposit interest rates are also reflected in loan interest rates. The increased funding costs also adversely affected the demand for housing loans starting with 2018. As of February 2018, annual housing loan interest rates reached higher than 14%.

Higher Treasury borrowing requirements and the Central Bank's tightening in quantitative and interest rate terms have affected the increase in the funding costs of the financial industry, and especially the banking sector.

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108   CBRT, "Inflation Report-2017-III" Ankara, August 2017, p. 57
109   ibid, p. 55
110   CBRT "Inflation Report-2018-I, Ankara, January 2018, p. 58

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Changes in the banking sector's loan trends and related household trends also require examination.

Changes in Personal Loans (2010–2017)

Billion TRY

	2010	2011	2012	2013	2014	2015	2016	Eyl.17	Ara.17
Total	173	224	226	332	356	385	420	474	489
Personal Credit Cards	44	55	72	84	74	79	82	89	91
Consumer and Other	63	86	100	129	149	156	167	191	199
Vehicle	6 / 7	7	8	9	7	6	7	7	7
Housing	61	75	86	111	125	143	164	187	192

■ Housing ■ Vehicle ■ Consumer and Other ■ Personal Credit Cards
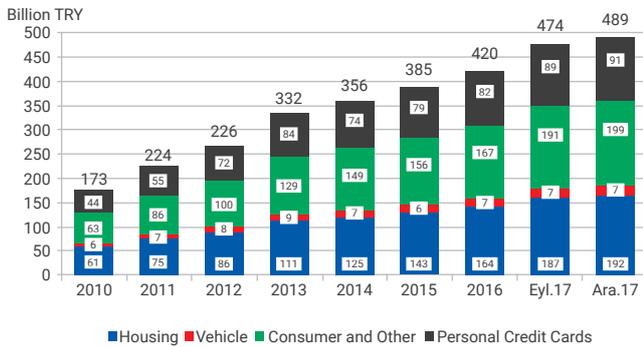
Source: BRSA

Credit demand is highly affected by macroeconomic conditions and general risk expectations. This situation is seen especially in housing, vehicles, consumer loans and expenditures with credit cards. Based on the announcement in February 2018 regarding the development of personal loans in 2017, we see that the housing loans, consumer loans, and credit card-related loans rose to 192 billion, 199 billion, and 91 billion TRY, respectively. As of end-2017, housing loans accounted for 39% personal loans in contrast to consumer loans which had 41% share. On the other hand, the credit cards had 19% share. Personal loan volume and growth can have a moderate course.

Another important piece of information on loans is periodical quantitative changes of loans. Based on a quarterly analysis of the amount, the positive attitudes of consumers due to the campaigns and an instinct to protect the economy increased the number and amount of housing loans in the last quarter of 2016. However, we saw a relative decline throughout 2017 due to both interest rate hikes and consumer's preference for certain projects thanks to the campaigns launched by the contractors.

third quarter of 2017 compared with the same period of the last year[111]. The average amount of housing loans increased by the end of 2016 and the first quarter of 2017 but then slowed down by the third quarter of 2017.

Distribution of Personal Loans (June 2017)

Personal Credit Cards %19

Housing %39

Consumer and Other %41

Vehicle %1
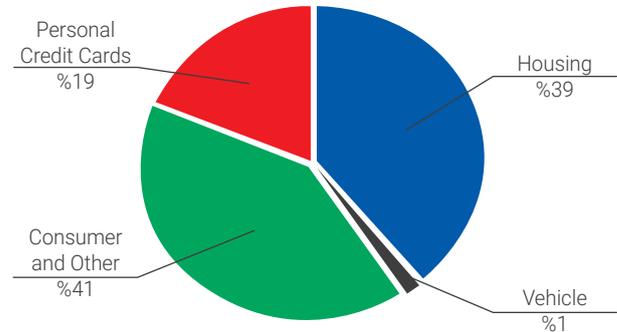
Source: BRSA

The distribution of housing loans according to bank types shows that deposit banks and, in particular, public banks provide the highest volume of loans. Then, the domestic private deposit banks rank second.

The Amount of Average Housing Loan Use
(TL '000/Units)

Q1'15	Q2'15	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17
97	110	112	112	115	120	115	128	140	142	132

■ Average house loan amount (TRY '000/Units)
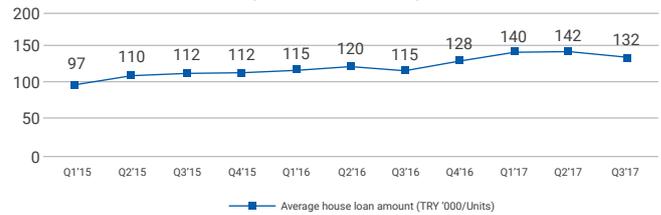
Source: TBB, GYODER

An analysis of the interest rate/loan relationship requires the assessment of whether the fund flow comes back to the issuers. This is called non-performing debt and is a leading indicator of financial and economic soundness.

Granted Housing Loan (Amount, TL)

Period	Q1'15	Q2'15	Q3'15	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17
Total loans offered (mn TRY)	12.483	12.748	11.173	10.382	11.223	13.280	13.215	19.378	18.815	17.790	16.343
Number of loans offered	129.040	116.023	100.141	92.963	98.016	110.918	115.179	151.019	134.212	125.085	123.674

Source: TBB, GYODER

The volume of new housing loans in the third quarter of 2017 rose by 24% to 16.3 billion TRY compared to the same period of the previous year. On the other hand, the average loan use rose by 15.2% to 132,000 TRY in the

Close tabs must be kept on the repayment process regarding loans obtained by corporate companies in the construction industry and the construction (mortgage) loans obtained personally.

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111   GYODER, "Turkish Real Estate Industry 2017, 4th Quarter, Issue: 9", February 21, 2018, p.35

The non-performing rate of consumer loans (including personal credit cards) fell to 3.46% in December 2017 year-on-year[112]. The housing loans have the smallest non-performing rate among all types of personal loans. Consumer sensitivity over the payment of housing loans matters considerably for the financial industry, too.

Housing Loan Share and Volume by Bank Type

General Industry Distribution	Number of Banks	Industry Share	Distribution of House Loan Volume (Million TRY)
Total Banking Industry	50	%100	186.706
Total Deposit Banks	32	%93	173.813
Public Deposit Banks	3	%43	79.700
Local Private Deposit Banks	9	%30	55.542
Foreign Deposit Banks	20	%21	38.570
Development and Investment Banks	13	%0	0
Participation Banks	5	%7	12.893

*Source: BRSA, GYODER *Latest data, September 2017*

Consumer Loans/NPL Ratio
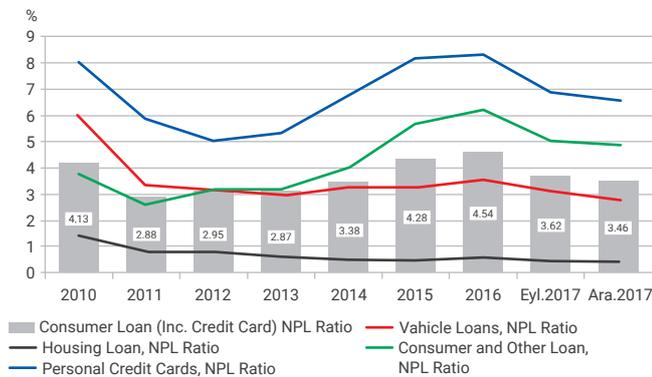
Source: BRSA

We should also examine the households' asset-liability relationship in the light of the above data.

Deposits are the most fundamental instrument in terms of household financial assets with a share of approximately 75%. They are followed by stocks and equities. On the other hand, almost all the obligations were based on loans[113].

Households' total asset and liability growth rates began to climb up once more in the first quarter of 2017 following a slow trend in 2016. This seems to result from the increase in total deposits on the asset side and the increase in housing and consumer loans on the liability side.

Although foreign exchange deposit accounts made the biggest contribution to household saving deposits, saving deposits adjusted for exchange rate effects resumed its increase after suffering declines until summer of 2017. Implemented in early 2017, the private pension system (BES) is expected to show its effects in the medium and long-term due to automatic participation, and to increase the savings rates[114].

In terms of lending, it was remarkable that Emlak Konut REIC and GYODER launched special loan campaigns together with the branded housing producers after consulting with banks regarding houses they manufactured. We can summarize the impact such campaigns on the industry as follows;

- The lending process gained an institutional dimension through the efforts of financial institutions and branded housing producers leading to longer terms. The long-term housing loans were extended from 10 to 20 years.

- We observed a similar effect in loan interest rates with interest rates generally falling to zero in the 60-month period and below interest rates in the market in other term types.

- Influenced by the campaign, other contractors who do not produce branded housing projects made similar campaigns in line with their capacity.

- A similar campaign by many manufacturers in the industry revitalized the construction industry, its components, and the economy.

We see three remarkable issues that may affect the home sales with loans for the rest of 2018.

1. The sales campaigns with special interest rates applied by corporate construction companies and umbrella professional organizations are still available. In such campaigns, banks, financial institutions, and contracting companies provided special interest rates to consumers below the market average. Banks made discount in loan interests as they could create loans and different products (cross-selling) while the real estate manufacturers increased sales by assuming some financial expenses and reducing their profit margins. It seems likely that similar campaigns will continue in different forms.

2. 2. We can see a possible decline in loan interest rates if macro-prudential economic policies and the CBRT's monetary policies have a positive im-

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112   BRSA, "Turkish Banking Sector Basic Indicators", December 2017", February 2018, p. 15

113   CBRT, "Financial Accounts Report, 2016-III" p. 4

114   CBRT, "Financial Stability Report", November 2017, Issue: 25, p. 19

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pact on growth and inflation and if the external developments support this.

3.3. Here the plans involve providing cheap sources for urban transformation through[115] Iller Bank[116] and implementing loan mechanism for the industry and consumers by reviving Emlak Bank. These institutions will have quite positive results regarding the source of financing and costs if these activities are implemented in the period ahead.

We can see the impact of sales through financial sector loans on the sale figures of mortgaged houses. The total sales involved 1,289,320 units in 2015, whereas sales of mortgaged houses added up to 434,388 units (approximately 33.6%) The total sales involved 1,341,453 units in 2016, whereas sales of mortgaged houses totaled 449,508 (approximately 33.5%). In 2017, the number of units sold reached 1.409.314, while the 473.099 units were sold through mortgages. (25.6%)

We observe a decline in the number of mortgage sales in 2017 due to high-interest rates and the impact of contracting campaigns. In 2018, the mortgage sales rate can be expected to be similar to the one in 2017. However, mortgage sales may increase more than expected with certain macroeconomic measures and incentives.

2.7. Housing Sales and Types

Housing sub-industry is one of the most critical components of the real estate industry, and it is distinguished from the rest of the real estate types with the fact that sales have a social and also economic impact. Housing sales are affected by a number of variables. It is influenced by behavioral variables as much as by economic variables. In some cases, investor's "rational" behaviors may differ as well.

Economically, price and borrowing rates (or alternative costs) are the main variables that affect the consumer's (or investor's) decision-making process. Interest rates and risk predictability are crucial in the housing sector in terms of both supply and demand. Financial sector transfers funds into the system. However, it is clear that the loans that have been issued to the financial sector must not create a risk for the system by going into default. The Turkish banking and finance sector manages the risks through substantial regulations and implementations (also through internal know-how).

The significant results of the aforementioned variable are demonstrated in housing sales figures (and prices). House sales figures are now used as a leading indicator in many modern economies, and they are monitored

to ensure sound development and in terms of growth numbers. Housing sales figures and their breakdowns directly or indirectly affect many industries.

Type-based House Sales (Units)

Sales Types	Average Sales (2011–2017)	2015 Sales Figures	2016 Sales Figures	2017 Sales Figures
Total Sales	1.289.002	1.289.320	1.341.453	1.409.314
Mortgage Sales	430.442	434.388	449.508	473.099
Other Sales	858.560	854.932	891.945	936.215

Source: TurkStat

According to the TurkStat data, an average of 1,289,002 houses changed hands annually according to the sales figures covering the last five years (2011-2017). In 2016 and 2017, house sales in all three sales types were higher than the averages in the last six years.

Sales Type (Quarterly)
(2015–2017/ 2nd Quarter)

Sales Type/ Year	First Sales	Second hand Sales	Total Sales	Mortgage Sales
2015-Q1	130.120	167.098	297.218	115.445
Q2 2015	152.801	185.061	337.862	126.652
Q3 2015	140.174	161.361	301.535	95.459
Q4 2015	175.572	177.133	352.705	96.832
2015 Total	**598.667**	**690.653**	**1.289.320**	**434.388**
Q1 2016	139.860	163.604	303.464	95.861
Q2 2016	152.305	175.030	327.335	105.223
Q3 2016	142.585	162.427	305.012	102.297
Q4 2016	196.936	208.706	405.642	146.127
2016 Total	**631.686**	**709.767**	**1.341.453**	**449.508**
Q1 2017	145.826	179.954	325.780	125.093
Q2 2017	150.397	178.186	328.583	120.282
Q3 2017	180.466	195.899	376.365	117.852
Q4 2017	183.009	195.577	378.586	109.872
2017 Total	**659.698**	**749.616**	**1.409.314**	**473.099**

Source: TurkStat

Sales types and related changes are among the most significant factors to be carefully monitored in sales figures.

- Annual sales amounts of 2016 and 2017 are above the sales average of the period from 2011-2017.

- Sales in 2017 rose by 5.1% compared to the last year.

- In 2017, 23.591 more houses were sold with a mortgage compared to the previous year.

- Other sales (promissory notes, contract) in 2017 seem to be 44,270 units more than 2016.

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115   Mehmet Özhaseki, "Milliyet Newspaper Interview ", August 21, 2017
116   http://www.ahaber.com.tr/ekonomi/2017/05/18/emlak-bankasi-yeniden-aciliyor, May 18, 2017

- The most important factors behind the increase in other sales can be interpreted as better borrowing facilities by contractors compared to the financial industry, projects jointly prepared by contractors and the financial industry to offer better conditions to consumers and apartment swaps as part of the urban transformation process.

- On a quarterly basis, second-hand sales surpassed first-hand sales in 2015, 2016 and 2017.

- The last quarter of the year (2015-2016-2017) saw the highest number of first-hand sales.

As can be understood from the figures, the Turkish housing market's structure adopts a certain trend. Quarterly fluctuations tend to be offset in a positive or negative direction in the following periods.

Number of Houses Sold, Based on Sale Type
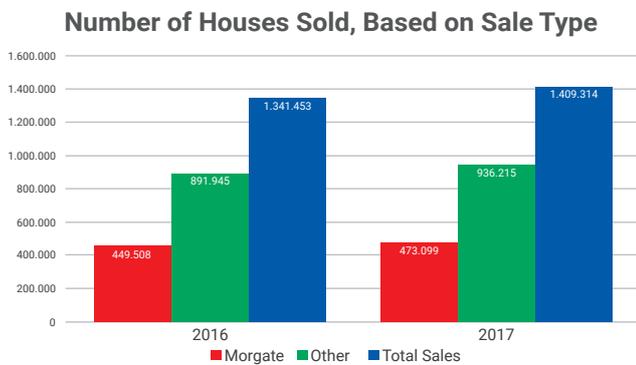
Source: TurkStat

Seasonality effects are observed in the Turkish real estate and construction industries. Housing sales and rents generally decline in winter months. The opposite is observed beginning with the second half of the year[117]. The years 2016 and 2017 saw an uptrend both in sales and sales types despite all the risk factors. According to the TurkStat data[118]; House sales in Turkey declined by 5.4% year on year to 95,953 in February 2018. Istanbul had the biggest share (16.9%) in housing sales with 16,247 homes. Istanbul was followed by Ankara (10.1%) and Izmir (6.2%) with 9,686 and 5,965 units, respectively. Hakkari, Ardahan, and Bayburt saw the lowest number of sales with 7, 8 and 31 houses, respectively.

27,916 houses were sold through mortgage sales in February 2018; Mortgage house sales declined by 27.8% to 27,916 houses across Turkey compared to the same month of the previous year. The share of sales with a mortgage in total homes sales was 29.1%. Istanbul ranked first with 5,190 mortgage sales and an 18.6% share. Amasya had the biggest share of mortgage sales in total home sales at 40.8%.

Other sales types lead to an exchange of 68,037 houses; DOther home sales across Turkey rose by 8.4% to 68,037 units compared with the same month of the previous year. Istanbul took the first place also in other house sales category with 11,057 homes and a 16.3% share. Other sales had a 68.1% share in total housing sales in Istanbul. Ankara came second with 6,497 home sales in this category. Ankara was followed by Izmir with 4,057 home sales. Ardahan had the lowest number of other home sales with 5 homes.

A Summary of Housing Sales (2016-2017)
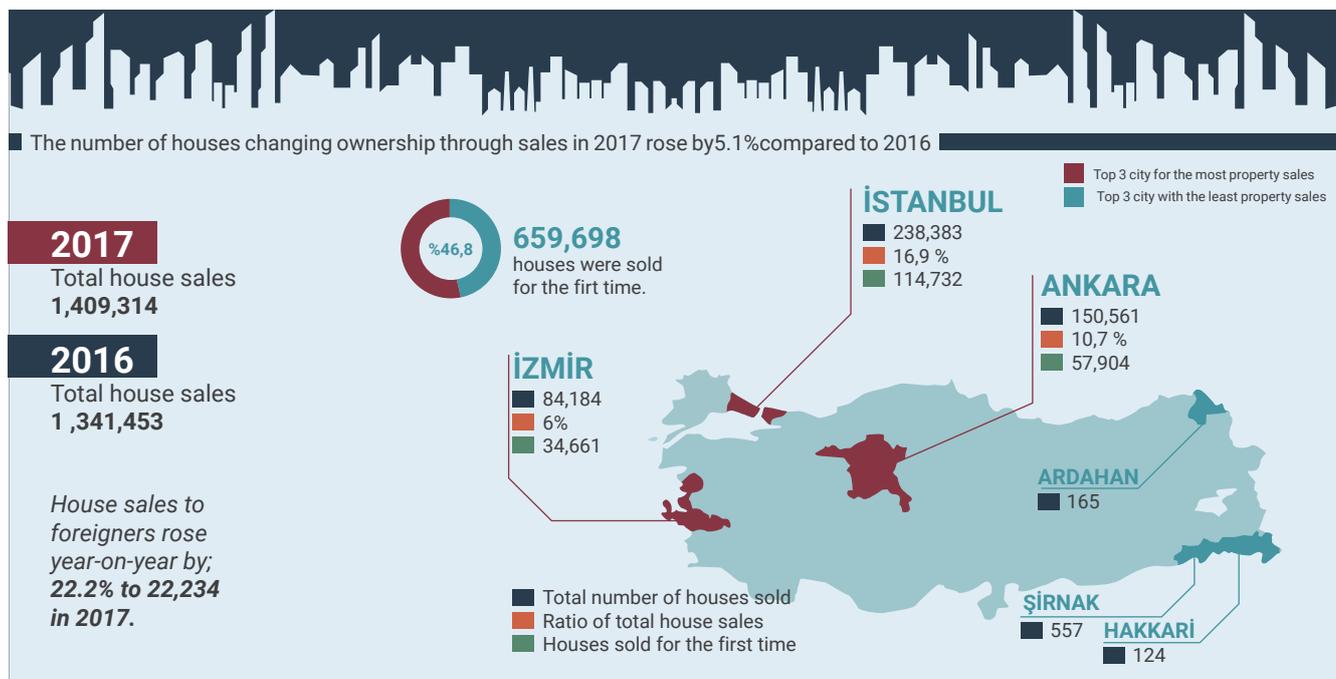
Source: TurkStat, AA

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117   Aşkın Mustafa, Dalkılıç Bahadır, "Real Estate and Housing Report" Emlak Konut REIC, September 2014, p. 71
118   TurkStat, 'Housing Sales Statistics", February 2018, Issue: 27795, March 21, 2018

**Number of House Sales Across Turkey
(February 2018)**
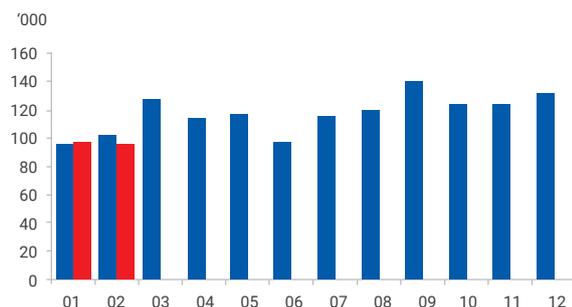
Source: TurkStat

43,713 first-hand houses were sold; The number of first-time home sales in Turkey declined by 3.3% year on year to 43,713. The first-time sales had a 45.6% share in total house sales. Istanbul had the biggest share in terms of first sales with 7,507 units (17.2%), whereas it was followed by Ankara and Izmir with 3,223 and 2,611 units, respectively.

52,240 houses changed hands as a result of second-hand house sales; The second-hand house sales declined year-on-year by 7.1% to 52,240 houses across Turkey. Istanbul took the first place also in second-hand sales with 8,740 homes and a 16.7% share. Second-hand sales had a 53.8% share in total housing sales. Ankara took second place with the sale of 6,463 houses. Ankara was followed by Izmir with the sale of 3,510 houses.

Sales Developments in Three Major Cities

The three biggest cities in Turkey (Istanbul, Ankara, and Izmir) have the heaviest activity in real estate. Istanbul is the flagship among these three cities. Therefore, the trend in these cities is critical for the analysis of the country-wide real estate industry.

Both internal and external risks proliferated throughout 2016. Housing sales reached record levels despite the weakness in the global economy, the Fed's interest rate hike, bigger geopolitical risks, and the treacherous July 15 coup attempt. The Turkish housing market maintains its buoyant atmosphere despite the global turbulence. The main reason for this can be demographic factors and build more livable cities that are supported by infrastructure. Despite the uncertainties in the world economy in 2017, the expectation that the monetary tightening will take much longer than expected and the Turkish economy's strong growth performance had a positive impact on real estate sales.

The Turkish housing market demonstrates maximum activity in the three biggest cities among which Istanbul is well ahead of others. These three major cities are followed by Bursa and Antalya markets. Emlak Konut REIC carries on its activities in the three biggest cities (Istanbul, Ankara, and Izmir) where sales concentrated as well as those in Anatolia (i.e., Kocaeli, Denizli, Konya, and Niğde) with increasingly better potential.

Buoyancy in sales in Istanbul, Ankara, and Izmir in sales can generally be attributed to these conditions;

- Demographic factors (population growth, migration, population density, change of the nuclear family structure)
- Increasingly accessible and prevalent transportation means,
- The interest of foreign investors,
- Attraction offered by big projects (such as bridges, airports, tunnels, Canal Istanbul, and accessibility between cities)
- Increasing construction quality and interest in the brand projects,
- Urban transformation and related activities,
- The Turkish investors' traditional preference for the housing industry,
- Continued interest of foreign investors and some investments,
- Implementing products and structures where by the construction industry can cooperate with capital markets and business partnerships (such as real estate investment funds and real estate certificates)

The type-based analysis of the housing sales in the three big cities is also important for the Turkish housing market. Istanbul has seen some momentum loss compared to previous years although it continues to lead the three big cities, which account for 35% of total sales. Izmir has a remarkable increase.

Housing Sales in Three Major Cities
(Type-based, 2016 and 2017)

2016	Total	Mortgage	Other
Ankara	144.570	57.073	87.497
İstanbul	232.428	87.350	145.078
İzmir	81.316	30.358	50.958
2017	Total	Mortgage	Other
Ankara	150.561	56.795	93.766
İstanbul	238.383	87.001	151.382
İzmir	84.184	31.254	52.930

Source: TurkStat

In the top three cities for sales, Istanbul maintains its leadership by far. Istanbul is a leader not only in total sales but also in sales with a mortgage and other sales. It is followed by Ankara, Izmir, Antalya, and Bursa.

Sales may be basically divided into two types. The first one is the marketsr[119], where the first-time sale of newly

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119   First-hand Sales It is the first sale of a house by a housing producer or by persons who agree with a producer on a flat for land method.

constructed real estates take place, and the other one is the sales of pre-owned, in other words second-hand, real estates. The first-time sales show the interest in the newly constructed real estates while pre-owned sales provide information on the market buoyancy and cash position. It must be remembered that demand is higher in housing markets with high liquidity in pre-owned home sales, which will also be reflected in the first-hand sales. As for the first-hand sales, the number of houses sold in 2015 was 598,667 representing a 10.5% growth compared to 2014. The pre-owned sales amounted to 690,653 in 2015 with a 10.7% increase. On the other hand, the first-hand sales in 2016 rose approximately 9.5% year-on-year to 631,686 units. In second-hand sales, this ratio was around 9.7%.

In 2017, the first-hand sales stood at 659,698 with a slight increase. On the other hand, the number of second-hand sales reached 749,616.

The Number of House Sales, Comparative
(2015–2017)
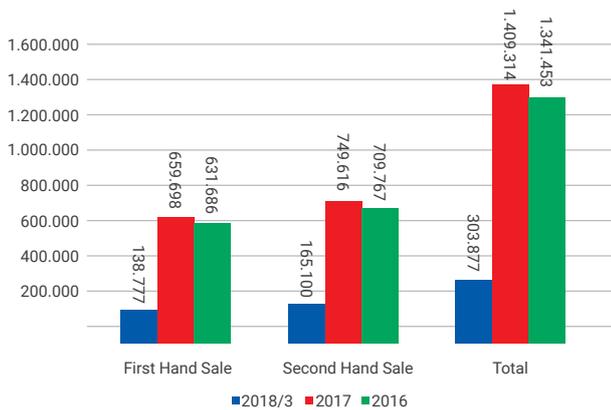
Source: TurkStat

Following is a description of first- and second-hand sales in five major cities. At this stage, the three major cities share the top places.

First-time and Pre-Owned Home Sales for Five Big Cities
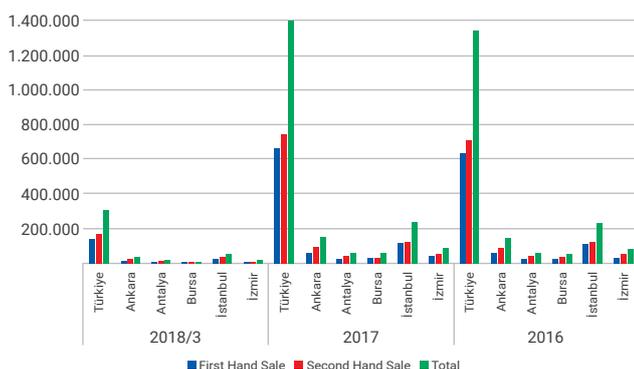
Source: TurkStat

Law of Reciprocity and Sales to Foreign Nationals

The regulation on real estate sales to "foreign nationals" was another important development concerning the housing sector as part of the real estate sector. The following article is the most important regulation that was introduced by the "Law on the Amendment of Land Registry and Cadastre Law," No 6302, which was published in the Official Gazette No. 28296 dated May 18, 2012.

"ARTICLE 35 – As necessitated by bilateral relations and the country's interests, foreign natural persons from the countries determined by the Cabinet can acquire real estate and limited rights in kind in Turkey, on the condition of complying with legal restrictions. The surface area of the real estate and independent and continuous limited rights in kind that can be acquired by a foreign national shall not be over 10% of the district where the real estate is located and over 30 hectares countrywide. The Cabinet will have the authority to increase up to twice as much the amount that can be acquired across the country.

Incorporated companies that are established according to their own laws in foreign countries shall acquire real estate and limited rights in kind, only within the scope of special provisions of the law. Companies other than these shall not acquire real estate or have limited rights in kind establish in their favor. Limitations stated in this article shall not apply when putting a lien in favor of these incorporated companies and foreign nationals."

The law enabled nationals of other countries to acquire real estate, who were not allowed to do so until that time due to the "reciprocity" principle and allowed nationals of neighboring countries to acquire real estate except border cities. Even though the law of reciprocity was enacted in 2012, it would be better to consider 2013 as the year when the legal regulation went into effect.

Increasing since 2013, foreign investors' interest was maintained as the main trend in 2018, and the following issues need to be noted as the main reasons behind this.

Granting citizenship to foreigners with $1 million real estate investments,

- VAT exemption for house sales to foreigners
- Turkish real estate market is qualified to respond demand at International standards,
- Preference of real estate buyers in Turkey regarding the way of life in relevant regions (climate, human relations, social facilities, transportation,
- Istanbul is a globally important metropolis and attracts increasing interest,
- The resume of foreigners' interest in tourist regions such as Antalya and Aydın and Muğla
- Interests in cities such as Trabzon, Bursa, and Yalova especially from the Gulf countries
- In addition to European investors, there is rising interest from investors in the Gulf and Arab world.

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Nationality-based Sales Graph

■ January-March 2017
■ January-March 2018

Country	Jan–Mar 2017	Jan–Mar 2018
Other Countries	769	890
Libya	35	48
USA	40	47
Palestine	97	76
Netherlands	38	76
Kazakhstan	63	96
Yemen	70	112
Sweden	58	101
Egypt	130	148
Qatar	51	109
Ukraine	111	105
Jordan	93	182
United Kingdom	116	155
Azerbaijan	159	189
Germany	109	220
Kuwait	368	286
Afghanistan	300	350
Russia	252	369
Iran	138	361
Saudi Arabia	435	519
Iraq	884	928
Total	4.316	5.367

Source: TurkStat

- Global real estate investment funds are making purchases and going into partnerships,
- As a result of the appreciation of foreign currencies, Turkish assets have been cheapened for foreign investors,
- Demand has increased in some cities as a result of immigration from neighboring countries,
- Changes have been implemented in architecture and design
- Transportation amenities offered by Turkey thanks to its central location on a global scale.

Foreigners purchased 22,234 houses across Turkey in 2017. House sales to foreigners rose by 22.2% in 2017 over the previous year. Istanbul and Antalya took the first and second place in terms of the number of houses sold to foreigners with 8,182 and 4,707 houses, respectively. Antalya was followed by Yalova and Bursa with 1,474 and 1,079 sales, respectively[120].

However, global risks and interstate problems affect the real estate industry just as other industries (tourism, transportation, agricultural products.) However, the sales saw significant increases upon the normalization of relations with the Russian Federation, the relative improvement in geopolitical risks and the incentive measures taken by Turkey.

3,518 houses were sold to foreigners in the first two months of 2018 in contrast with 2,716 houses in the same period last year. Around 29% increase in the first two months seems positive for the year 2018.

House Sales to Foreigners (2017)

↑ %22,2

CITIES WHERE FOREIGNERS PURCHASED THE HIGHEST NUMBER OF HOUSE

ISTANBUL	8.182
ANTALYA	4.707
BURSA	1.474
YALOVA	1.079
TRABZON	978

THE NUMBER OF RESIDENTIAL SELES TO FOREIGNERS ACCORDING TO THEIR NATIONALITIES

IRAQ	3.805
S.ARABIA	3.345
KUWAIT	1.691
RUSSIA	1.331
AFGHANISTAN	1.078
(TOP 5 COUNTRIES)	
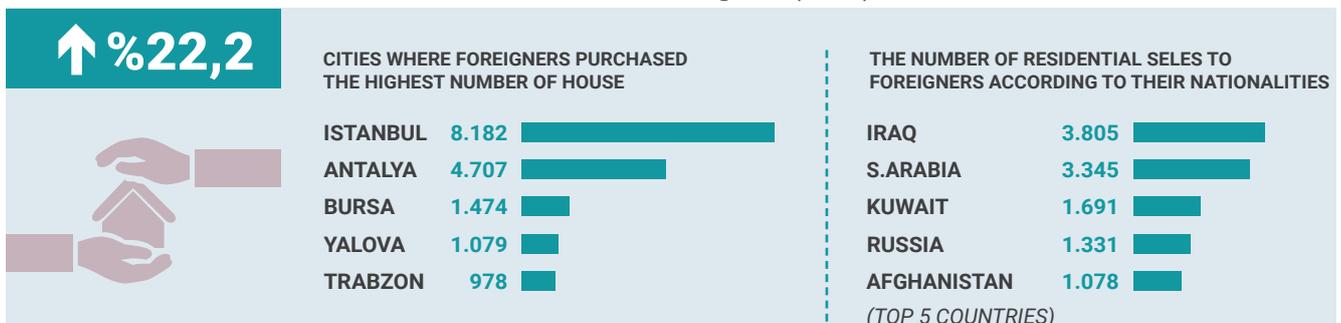
Source: TurkStat, AA

House Sales to Foreigners (February-2018)

↑ %32,4

CITIES WHERE FOREIGNERS PURCHASED THE HIGHEST NUMBER OF HOUSES

ISTANBUL	604
ANTALYA	415
BURSA	134
YALOVA	84
TRABZON	71

THE NUMBER OF RESIDENTIAL SALES TO FOREIGNERS ACCORDING TO THEIR NATIONALITIES

IRAQ	308
S.ARABIA	178
RUSSIA	128
IRAN	122
AFGHANISTAN	118
(TOP 5 COUNTRIES)	

Source: TurkStat, AA

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120   TurkStat, "Housing Sales Statistics, December 2017" Issue: 27781, January 19, 2018
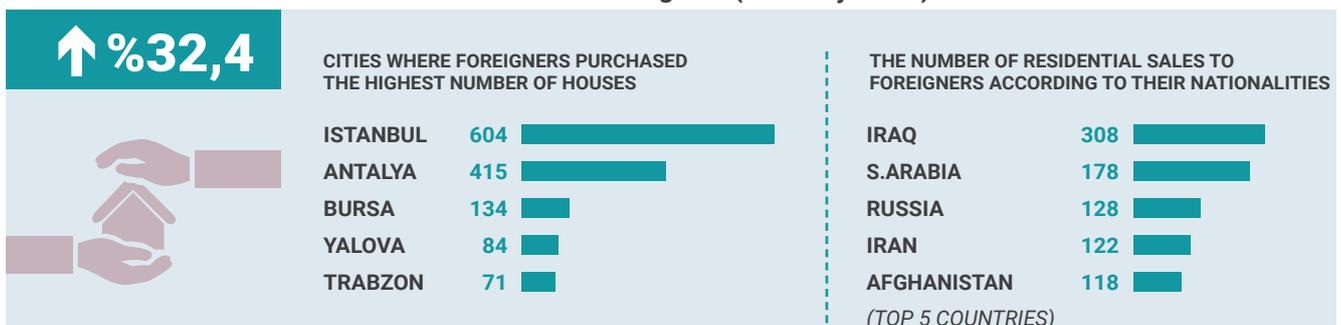
In February 2018, the number of sales to foreigners rose by 32.4% year on year to 1,729. In February 2018, Istanbul ranked first in terms of housing sales to foreigners with 604 residential sales. Istanbul was followed by Antalya, Bursa, Yalova and Trabzon with 415, 134, 84 and 71 houses, respectively.

THouse Sales to Foreigners Across Turkey (2015 - 2017)
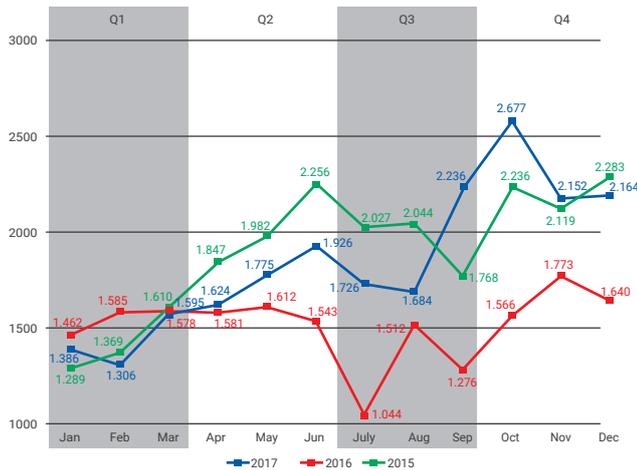
Source: TurkStat, GYODER

Turkey offers a convenient environment for foreign investors' real estate purchases as a peaceful island within its geographical proximity. Investors, especially from neighboring, seem to prefer it in an increasing level. The interest of foreign investors in the Turkish real estate industry can be readily expected to have upward trend by years.

Foreigners preferred Istanbul the most in ther 2017 real investments. Sales in Istanbulrose year-on-year by 19% and 32% in terms of surface area and the number of people, respectively.

In 2017, Istanbul, Antalya, Muğla became foreign investors' preferred choice in terms of real estate purchases. A significant increase occurred in foreigners' real estate acquisitions mainly in these three cities compared to 2016.[121]

An examination of foreigners' all real estate investments in 2017 shows a 15.9% and 17.1% increase in space and number of transactions, respectively, compared to the previous years. Real estate investments by German nationals increased by more than 100% in 2017 compared to 2016. On the other hand, the number of persons rose 26%[122].

Foreign investors' real estate purchases create an inflow of 'Foreign Direct Investment' (FDI), which has increased significantly after the new legal regulation came into effect. In terms of the balance of payments, FDI provides immense support in reducing the need for external funding. An analysis of the period from 2011 to late 2017 shows that the total direct foreign investment inflow amounted to $97,257 billion, $24,708 billions of which entered the country for real estate purchases. In terms of the balance of payments, real estate sales appear as a very important item especially for financing needs to be closed in the long term.

Foreign Direct Investment Inflows and Real Estate Purchases[123]
(2011−2017)

Years	Foreign Direct Investments ($ billion)	Real Estate Purchases ($ billion)
2011	16.182	2.013
2012	13.628	2.636
2013	12.896	3.049
2014	12.828	4.321
2015	17.550	4.156
2016	13.343	3.890
2017	10.830	4.643
Total	**97.257**	**24.708**

Source: CBRT, Balance of Payments Data, 2017

Based on figures from the CBRT and the Ministry of Economy, the highest number of real estate sales took place in 2017 following implementation of the Law of Reciprocity. The direct foreign investments inflows for real estate reached $4.6 billion. Despite the treacherous coup attempt, the figure stood at around $4.1 billion in 2016.

In 2017, the number of fund inflows to Turkey for real estate purchases was higher than its level in 2016 thanks to the incentives provided for this purpose.

Throughout 2017, the industry received important support especially with the introduction of VAT exemption to foreign real estate buyers and Turkish citizens residing abroad as well as granting citizenship

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121   GYODER, "Indicator, Turkish Construction Sector 2017 4th Quarter Report", Issue: 11, February 21, 2018, p.30
122   ibid, p. 30
123   Please see for details;
        TCMB, http://www.tcmb.gov.tr/wps/wcm/connect/TR/TCMB+TR/Main+Menu/Istatistikler/Odemeler+Dengesi+ve+Ilgili+Istatistikler'

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and residence permit to foreigners bringing funds to Turkeyr[124]. We should note that sales could increase further if the real estate purchase amount is reduced in regard to the foreigners' real estate purchases if transactions are simplified, and relevant information is provided on an international scale.

Nationality Breakdown of Persons Preferring to Buy Houses in Turkey (2017)

Source: TurkStat, GYODER

PART THREE

3. Global Housing Prices

This part provides an analysis of the changes in global housing prices and main expectations regarding them.

Price and other features (e.g., risk and related future projections, assessments) of assets are the main determining factors for the investor when making a decision. As the world economy gradually becomes more global, and International fund flows take place fast and intensely, it is easier now for similar asset prices to be affected by each other. Therefore, it is crucial for investors and the industry players alike to have knowledge of global prices and directions.

The construction industry and housing as its complementary industry are important for each economy. The industry provides value by setting in motion sub-sectors as well as creating employment and shelter. Thus, housing prices, as well as price movements and financial activities in the construction sector, affect a large section of the population either directly or indirectly.

With constantly increasing effect for the last twenty years, globalization impact continuously both economic and social trends in different countries. This interaction starts with real estates and related securities. Its global dimension will be better understood considering that the 2008 crisis resulted from the construction industry and, in particular, real estate developments.

Apart from fluctuations created by funds with varying terms and structures which travel around different countries for worldwide investment purposes, house prices are globally affected by both expectations and developments in the overall world economy. In world residential and commercial real estate prices, which may differ by country and region, economic conditions and perception of risk in the related country gain importance.

3.1. Asset and Housing Bubble

The notion of an asset bubble is the issue most discussed by economists today. By definition, an asset is a value, and its worth is measured by money in modern economies; therefore, an asset bubble could be described as a rapid increase in prices.

Another point is that rising asset prices cause wealth to grow for those who own them.

In this context, an asset bubble could be described as "artificial wealth" that is created due to asset prices rising faster than those of goods and services for at least five consecutive years[125].

The growth of wealth develops in a sound manner if it has been acquired by transforming national savings into investments. This brings about healthy growth in national income. Growth that depends only on asset sales without the proper resource structure or effective production results in "bubbles."

The creation of economic infrastructure is not enough for these bubbles to occur. Behavioral and social factors that feed the downward spiral also have to be in place at the time of the price increase and subsequent collapse. An upward price hike occurs if projections are positive and people believe they can sell their assets for more than they paid for them.

Price bubbles are created as assets' market prices exceed basic values. Rising asset prices can set in motion a demand shock. A demand shock may also be created by real income increases or low-interest rates. However, the bubble process can occur due to an increase that goes beyond even the effects of these basics. The expectation that price increases will continue as a result of increased demand cause new buyers to arrive. The trend gains even more momentum, and price hike accelerates when new buyers enter the market with this expectation. The general trend can be adopted, overlooking cash flow and appraisal issues in prices[126].

Rising asset prices advance the wealth of people and businesses that have previously- acquired assets. Credit institutions in particular issue loans by expanding their credit resources as a result of the "wealth effect and increased amount of guarantees."

Sales, which arise from projections that asset prices will not increase for any reason, adversely affect the asset areas first in terms of credit; then they spur sales even more, eventually causing prices to slump faster as other prospective buyers abstain from buying.

In order for a housing price bubble to occur, a number of demand- and supply-related variables must exist concurrently. Furthermore, housing prices are affected by a variety of factors such as rising real incomes in related countries, home ownership incentives from governments, tax regulations, expectations, and more.

Another approach to the notion of housing price bubble is that house loans increase and push the housing prices up. It is obvious that rapid increase in both mortgage loans and their securitized derivatives played a role in the crisis of 2008. Central banks of various countries took steps in the deployment of macro-prudential measures on the house financing system and loans[127].

125   Cansen, Ege, 'Hürriyet Newspaper', December 25, 2010
126   Kansu, Aydan "From Housing Bubble to Financial Crises: USA Mortgage Crises', Scala Yayınevi, Istanbul, 2010, p.22
127   https://agenda.weforum.org/2014/12/how-to-manage-house-price-booms/

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Change expectations in loan and general interest rates also have an effect on housing prices. The IMF conducted a study in 2009 to shed light on when an asset bubble might burst depending on several macroeconomic indicators. The conclusion stated that an examination of the following variables might provide insight into the burst[128].

- Loans/GDP
- Growth in Stock Prices
- Growth in Outflow Levels
- Growth in Housing Prices
- Inflation
- Housing Investments/GDP
- Current Account/GDP
- Capital Investments/GDP

Nevertheless, these parameters are greatly affected by globalization and by extension, by risk appetite, quantitative easing, and other economic-political factors. They may not, therefore, provide a complete answer regarding the burst.

Regardless of the asset type, analyses should be based on time and space. A "balloon" is described in the case when assets that may be considered as "excessively" priced at certain times exceed the previous high prices at other times.

On the other hand, US economists K. Case and R. Shiller[129] point to the following factors as indicators of a housing bubble;

- The pressure individuals receive from their immediate environment to own a home
- The expectation of a rise in housing prices in the future
- An increase in housing prices that surpasses spendable income
- Frequent comparison between the wealth generated by being a homeowner and other asset income
- A wealth of information in the media and in other communication channels regarding home ownership
- Increasing frequency of conversation about housing in daily life

A number of factors must coincide and the prices must react to them with a sharp downtrend for housing or other balloons to be created and burst, If occasional declines in asset prices stop at a certain point and then rise again, this is not considered a "burst bubble" but rather a process of healthy "price adjustment".

In international economy literature, the term "balloon" instead of "bubble" is used for some assets to describe price increases that have reached a certain size but cannot still be considered as a balloon.

Considering that changes in real estate prices influence many businesses in the real and financial industry, it will appear that it is an indicator that should be carefully monitored on a global scale.

The price of real estate and related variables affect a large portion of the population from central banks to investors to citizens on the street. In recent years, macro-decision makers and central banks have been monitoring real estate as an important asset. But, another important macroeconomic impact is the multiplier attribute that sets other sectors in motion. Industry data is constantly monitored due to this aspect.

3.2. Growth in Housing Prices in Developed Countries

2008 was a turning point for the developed economies. The home financing system[130] in particular, took a strong hit; the downfall affected not only financiers but also many other sectors in a chain reaction, causing the crisis by creating a deflationary process..

As was the case for all assets, extremely sharp adjustments were made in housing prices at the outset and throughout the crisis, and declining prices adversely affected both the real estate and finance sectors to a high degree.

Post-crisis expansionary monetary and economic policies aimed at revitalizing demand and spurring investment. For this purpose, decision-makers of the US economy and the Fed took quite bold steps, trying to resolve the post-crisis troubles. The Fed started to monitor housing prices to assess the related outcomes during and after the monetary policy-making phase. The Fed's inclination to cut the monetary size since 2013 has occasionally led fluctuations in housing prices as in any other assets. However, the size of these fluctuations varies from country to country. Although the Fed's policies have created global effects, its primary aim has been to create a recovery in the US economy including the housing industry. In this context, the US housing market has reached and surpassed pre-2008 crisis price level.

Housing prices followed a downward trend for a long time (from 2008 to 2012) in the post-crisis period in the US and started to recover only in 2013. The increasing trend in prices in 2015 seems to have accelerated even further. This acceleration can be said to continue in 2016. Housing prices rose considerably in some states sparking bubble debates, particularly because the real estate industry benefited from the implementation of revitalizing policies as promised by Donald Trump before he won the US Presidential elections.

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128   IMF,'WEO-2009'
129   They are also the creators of the Case-Shiller housing index, one of the most important US housing indicators
130   In developed countries, major damage occurred as a result of low-guarantee and high risk securitization of long-term mortgages, and the trading of these instruments in the derivatives markets

US Housing Prices
(January 2005=100-Seasonally Adjusted)
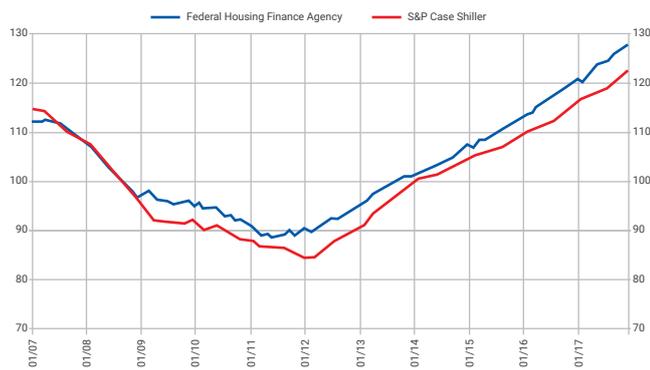
Source: TurkStat, BRSA, Latest Data: November 2017

Low-interest rate environment that results from expansionary monetary policies brings with it certain financial risks for developed countries, but this turns into a policy for ensuring economic recovery in the short term. With the effect of these policies, stock market indices and price earnings ratios rise, while bond yields and risk premiums fall. As in other assets, rising trend in housing prices is continuing, especially in the US, UK, and Canada.

However, house prices rise exceeding the level in 2007 over the past 2 years in certain US regions have also raised concerns over the formation of a new bubble. But despite such a price situation, the indicators are healthier than the 2008 crisis with regards to the financing structure.

Despite having implemented expansionary monetary policies in developing countries, particularly in the Eurozone, the banking industry is not supporting economic recovery at expected levels. The banking industry loans climb up in the US, while they increase gradually in the Eurozone. In the Eurozone, banks are reluctant to expand their balance sheets and avoid taking risks. Both demand and supply-oriented factors can be said to be effective in this development. While a high debt ratio limits credit demand, the banking sector's credit supply shrunk as a result of non-performing loans and balance sheet limitations in the aftermath of the crisis. Banks continue to struggle to strengthen their capitals and consolidate balance sheets.

The impact of this process is felt more by the borrowing of individuals and institutions and thus sets back economic recovery. At this point, it should be remembered that demographic factors influence especially the buoyancy of the housing sector. A naturally declining demand is also another phenomenon in the EU countries which have an aging population. However, the EU region started to attract demand mainly from outside after 2013.

The stimulus effect of post-crisis measures is evident, particularly in the US economy. Recovery continues in the UK where similar policies have been implemented, and there are discussions regarding whether the sharp ascent in housing sales and prices is healthy or not. As noted above, the US housing price index surpassed its crisis level. On the other hand, the former British colonies (Commonwealth countries) such as Canada, Australia, and New Zealand has seen a strong uptrend since 2010. In the UK, Brexit affected housing prices negatively causing a significant decline in the bubble, but it rose again rapidly later on.

Although home prices in the US, United Kingdom, Canada, New Zealand, and Australia lost their uptrend, they can be expected to rebound throughout 2017. However, an economic disruption in one of these countries or a rapid decline in asset prices will affect other countries as well.

Japan provides a weaker outlook in terms of the housing price trend in the advanced economies. The slow increase in the housing prices draws attention despite implementation of policies to revitalize the economy in the country which struggles with chronic deflation and recession. In Germany, although economic data fare better than in other EU countries, house prices continue to rise in a limited range.

Meanwhile, the general trend points to rising housing prices in emerging countries, despite variations between countries. Housing prices in Russia, a BRIC country, has continued to decline since late 2015. This can be explained by the ongoing economic problems and declining commodity prices. Although China is in better shape, housing prices started to accelerate in 2016. The Chinese government intervened mainly in the housing and banking industries until early 2015 in order to prevent economic overheating and bad loans. Then, it provided incentives to certain industries, primarily housing, to mitigate the effects of smaller growth and global slowdown.

Brazil was the country with the fastest housing price increases in the group of developing countries until 2014 whereas prices have been falling since that year due to the political instability and economic difficulties. Together with India, Turkey is one of the two countries with still buoyant house prices. The housing market preserves its dynamism in Turkey despite all internal and external risk factors. As a result, prices also see increases. In India, there has been a strong upturn with increased housing prices since 2010. There is an expectation that the economy will steadily grow while buoyancy will continue for a while longer due to demographic factors. Accelerating from mid-2016 onwards, the uptrend in India has moved the prices to the highest level among BRIC countries. On the other hand, 2017 saw smaller acceleration in terms of prices.

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Housing Price Indices by Countries-Inflation-adjusted
(4th Quarter, 2017)

Country	Q4 2016		Q4 2017	Q4 2017
HOUSE PRICE CHANGE (INFLATION ADJUSTED)				
Iceland	12.53		12.88	-1.11
Hong Kong	6.61	↗	12.81	2.54
Ireland	8.98	↑	11.92	2.22
Macau	23.09	↑	9.24	5.49
Montenegro	-13.36	↓	8.59	-5.24
Canada	10.66	↑	7.07	-1.29
Philipines	7.16	↓	6.95	1.46
Netherlands	4.37	↘	6.73	-0.03
Chile	-1.82	↑	6.69	-0.65
Latvia	5.36	↑	6.47	0.47
Sweden	4.74	↑	6.11	0.16
Romania	11.01	↑	5.92	-3.40
New Zealand	9.47	↓	4.92	4.65
US (FHFA)	4.44	↓	4.47	1.23
Germany	6.86	↗	4.45	-0.16
Puerto Rico	-3.73	↓	4.45	3.38
US (Case-Shiller)	3.26	↑	4.07	0.67
Spain	0.10	↗	3.32	-1.41
Japan (TOKYO)	9.32	↑	3.20	1.80
Thailand	-1.50	↓	3.16	1.60
Portugal	3.88	↑	3.03	1.37
France	1.02	↘	2.75	0.68
Slovak Republic	6.00	↑	2.43	-1.92
Finland	0.21	↑	0.92	-0.35
Macedonia	-0.91	↗	0.87	2.47
Singapore	-3.31	↑	0.79	0.60
Mexico	4.07	↑	0.73	0.66
Taiwan	-2.92	↓	0.55	0.12
South Korea	-0.50	↑	0.27	1.25
Jersey	2.14	↗	0.21	2.41
Indonesia	-0.89	↓	0.01	0.11
UK (Nationwide)	2.97	↗	-0.08	-0.88
Lithuania (5 cities)	3.72	↓	-0.33	0.08
Norway	6.36	↓	-0.60	-1.98
Greece	-0.53	↓	-1.09	-0.67
Brazil (Sao Paulo)	-5.51	↘	-1.50	-0.78
Switzerland	1.43	↑	-1.70	-0.28
Austria (Vienna)	1.99	↓	-1.84	-1.63
China (Sahangai)	21.68	↓	-1.94	-0.53
Israel	5.24	↓	-3.33	-3.80
UAE (Dubai)	-2.86	↓	-5.23	-2.52
Russia	-9.27	↓	-5.48	-0.09
Mongolia	-6.05	↑	-5.61	-0.80
Ukraine (Kiev)	-3.34	↗	-7.97	-1.63
Qatar	-5.15	↓	-10.43	-1.58
Egypt	1.19	↓	-11.49	-7.38

↑ More than 1 percentage point increase in house price shange
↗ Less than 1 percentage point increase in house price shange
↓ More than 1 percentage point decrease in house price shange
↘ Less than 1 percentage point decrease in house price shange
Compared to same period of last year

Source: http://www.globalpropertyguide.com

An examination of the data on a country basis points to the following[131];

- House pricing, calculated after adjustment for inflation, rose in 30 out of 45 countries.
- Nominally, price movements pointed to increase in 37 countries, whereas the suffered declines only in eight countries.

- Approximately half of the housing markets examined indicated a slowdown in price acceleration compared to the previous year.
- As for regional price movements, Europe, Hong Kong, Macau[132] and Canada continue to witness strong price increases. However, prices have been declining in most of China, Russia, Japan and the Middle East.
- The housing market, which saw strong price increases throughout 2017 included Iceland (12.88%), Hong Kong (12.81%), Ireland (11.92%), Macau (9.24%), Montenegro (8.59%) and Canada (7.07%)..
- The countries that stood out in terms of price declines in 2017 included Egypt (-11.49%), Qatar (-10.43%), Ukraine (-7.97%), Mongolia (-5.61%) and the Russian Federation (-5.48%)..

According to the results of the "Global Residential Cities Index" published by Knight Frank, İzmir ranked second with house prices increasing nominally by 19.8% in the third quarter of 2017 compared to the same period of the previous year, whereas Ankara ranked 36th with a 7.6% increase. Witnessing 6.5% surge in the same period, Istanbul ranked 53rd[133].

"Shelter" will continue to be the main need under any circumstances. Thus, the industry and its components must be analyzed in the global context. Numerous International organizations publish studies and analyses on housing prices in an effort to interpret the economic trend. The housing industry is closely studied so as to understand, especially the "expectations" when analyzing the economy in general.

Recently, the IMF[134] published global housing price changes per country and shared global information on the sector and financial conditions in the post-2008 crisis era.

According to this, weighted global housing price index maintains its gradual recovery. The analysis of price graphics shows that despite a very rapid price increase from 2000 to 2007, a worldwide adjustment occurred in prices before the crisis of 2008. Despite the gradual rise in the global housing prices since 2011, the index could only reach the price level of 2007. Relative sales buoyancy in developed countries (the US, the UK, Canada, and the like) is a driving force for world housing price index. However, worldwide monetary policies and their implementation affect real estate markets as well as other assets. Housing prices as a global asset started to have an upward momentum after the first quarter of 2017.

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131   http://www.globalpropertyguide.com/investment-analysis/Strong-house-price-rises-continue-in-Europe-US-Canada-and-parts-of-Asia-The-Middle-East-is-weak
132   An autonomous region of the People's Republic of China
133   CBRT, "Housing Price Index Year-end Evaluation Report-2017", p.12
134   IMF, http://www.imf.org/external/research/housing/" May 3, 2017-rapor hazırlandığında en son veri olarak Mayıs 2017 rakamları bulunmaktaydı.

Global Residential Cities Index
(Percentage, Nominal)
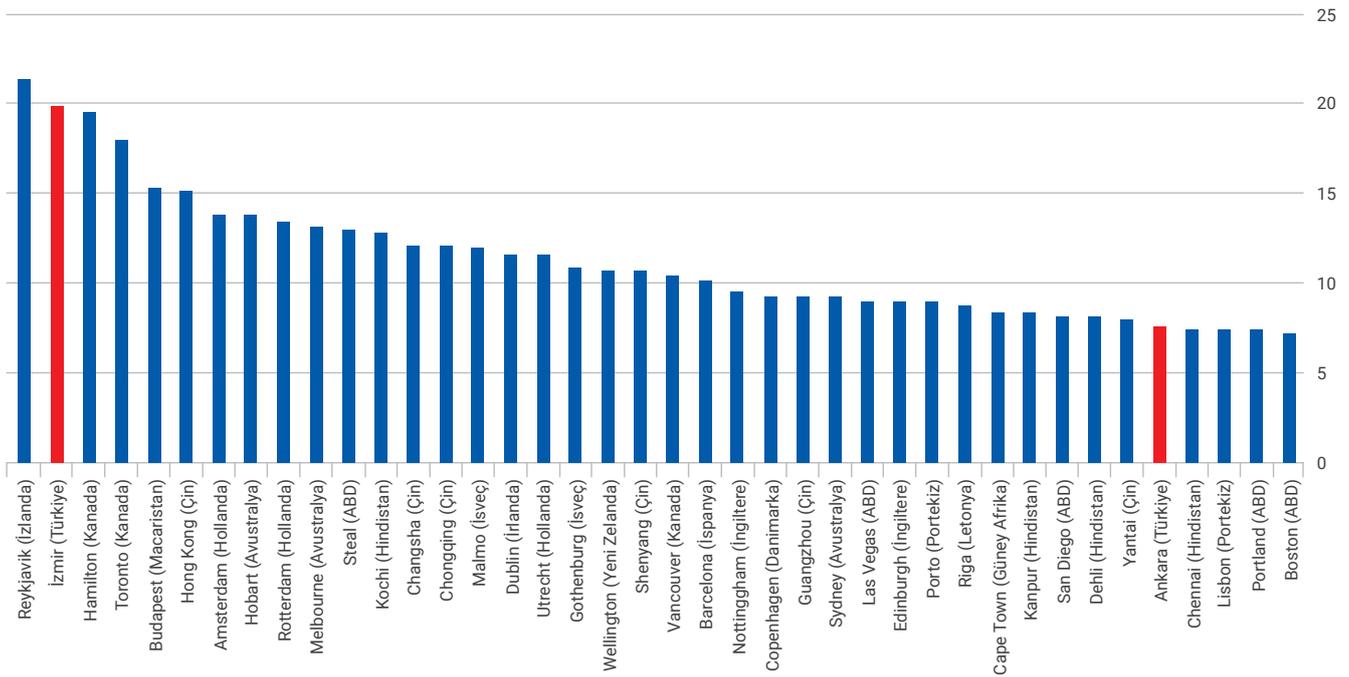
Source: Knight Frank, CBRT

Changes in Global Housing Prices
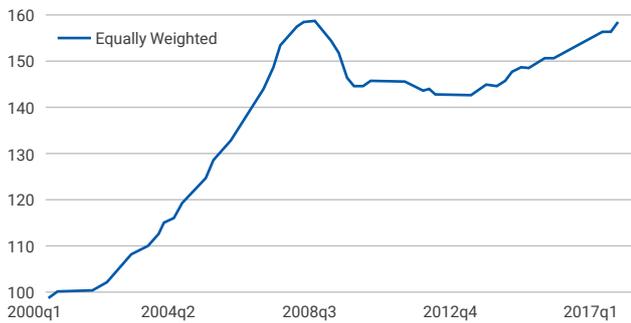
Source: IMF

Considering the real price changes in the world, changes in house prices vary considerably by country Hong Kong, Iceland, Canada, Ireland, and the Czech Republic saw the biggest real price rises whereas Ukraine, Russia, Brazil, Qatar, and Kazakhstan saw the biggest real price declines in the second quarter of 2017. Hong Kong and Ukraine were considered to observe the fastest real house price surges and declines, respectively.

Among 64 countries in the graph below, Turkey dropped back from its 24th place in terms of price increase in the fourth quarter 2016 price to the 39th place in the second quarter of 2017. In our country, real house prices move away from the concept of the balloon with a moderate correction.

While there are many factors behind the variation in price changes by country, key reasons include varying gross domestic product figures, investment/saving habits, demographic composition, war, natural disas-

ters and changes in foreign capital-related factors. Moreover, local regulations and geographical factors also affect global preferences.

Loan interest rates, ease of access to general financial resources, and economic projections are variables that make a great impact on housing prices. The housing industry was the first area influenced by the money supplied subsequent to the 2008 crises for the revival of the economy. The Philippines, Hong Kong, Turkey, Slovakia, and China recorded the fastest real credit growth in the third quarter of 2017. Meanwhile, Ukraine, Greece, Portugal, Ireland and Spain saw the number of their loans shrink. Turkey ranked 3rd in loan growth among 44 countries.

Such growth can be considered healthy only if financiers have sound finances and there are no issues in loan repayments in these economies. In Turkey (as explained above), the non-performing debt ratio is quite low, and loan institutions do not have structural problems. As of 2017, Turkey's banking industry has offered significant support to the industry in terms of loans. As previously stated, in countries that consider it likely to have problems with growth in loans, central banks take macro-prudential measures to prevent any related consequences.

The ratio and correlation between a home's rental value and the sale price is another method used worldwide to set value for a house. Investment and demand are impacted by how long it will take for the funds provided for a house to be repaid. If rents rise

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Housing Price Changes by Country
(Q2 2017)
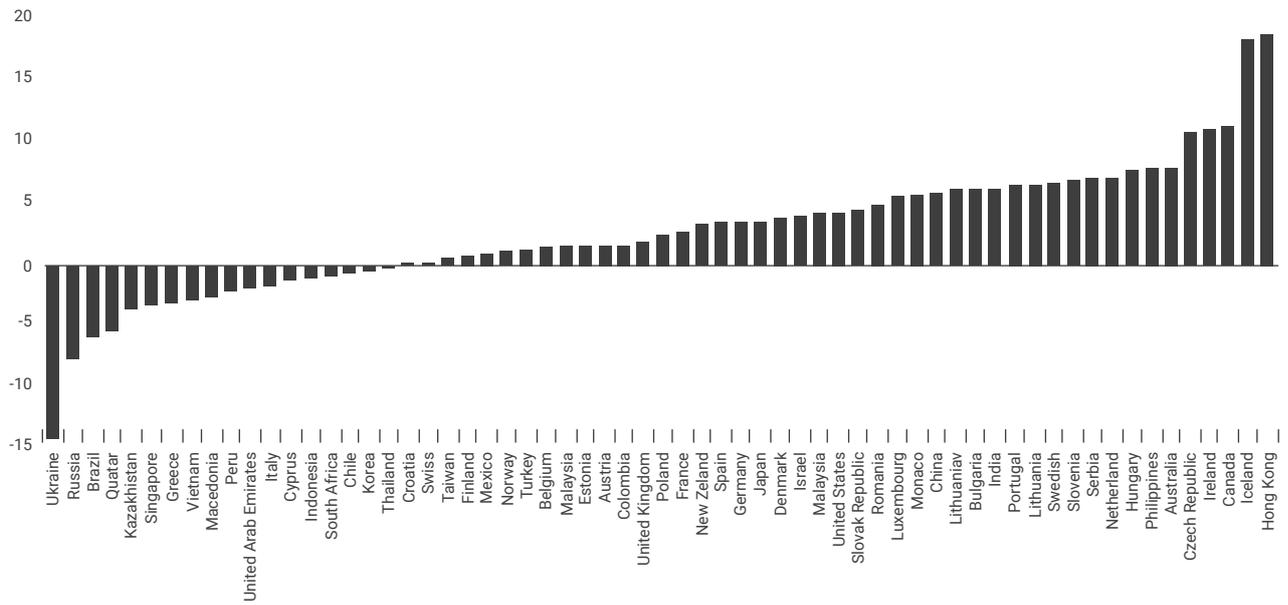
and the increase in home prices remains below that of rents in a country (due to factors including high demand, expectations in the coming period, etc.), both speculative and real demand for home purchases will climb. Similarly, if rents are low and house prices are high, the opposite can be expected. If rents and home prices increase together, this should be analyzed along with the growth in the country, personal and spendable income state, and loans to see the reason for this increase. The worldwide price-rent comparison reveals that Russia, Lithuania, Estonia, Greece, and Italy have the lowest rates. On the other hand, Colombia, Canada, Sweden, New Zealand and Israel appeared as the top countries with faster increases in rental amounts than housing prices. In 2017, we started to see an adjustment between house prices and rent values in Turkey. The main factor here is a more moderate increase in house prices compared to previous years and relative balancing in rents. Such trend can be expected to continue throughout 2018.

Real Credit Growth in the World
(3rd Quarter, 2017)
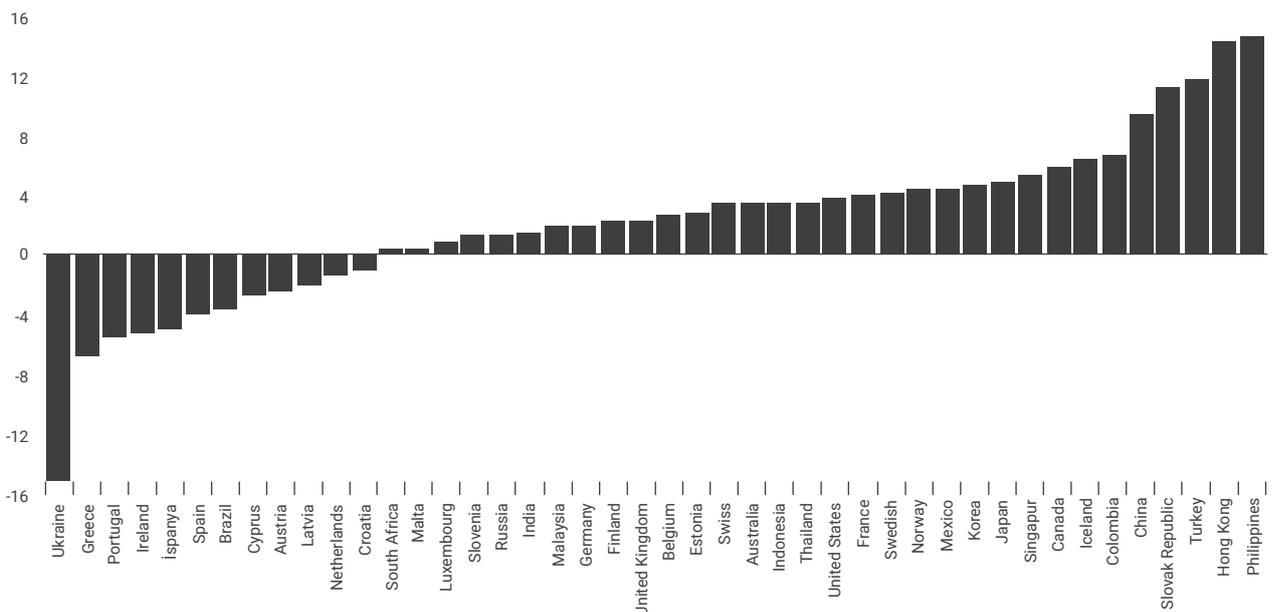
Housing Prices-Rent Relationship in Selected Countries
(Q2 2017)
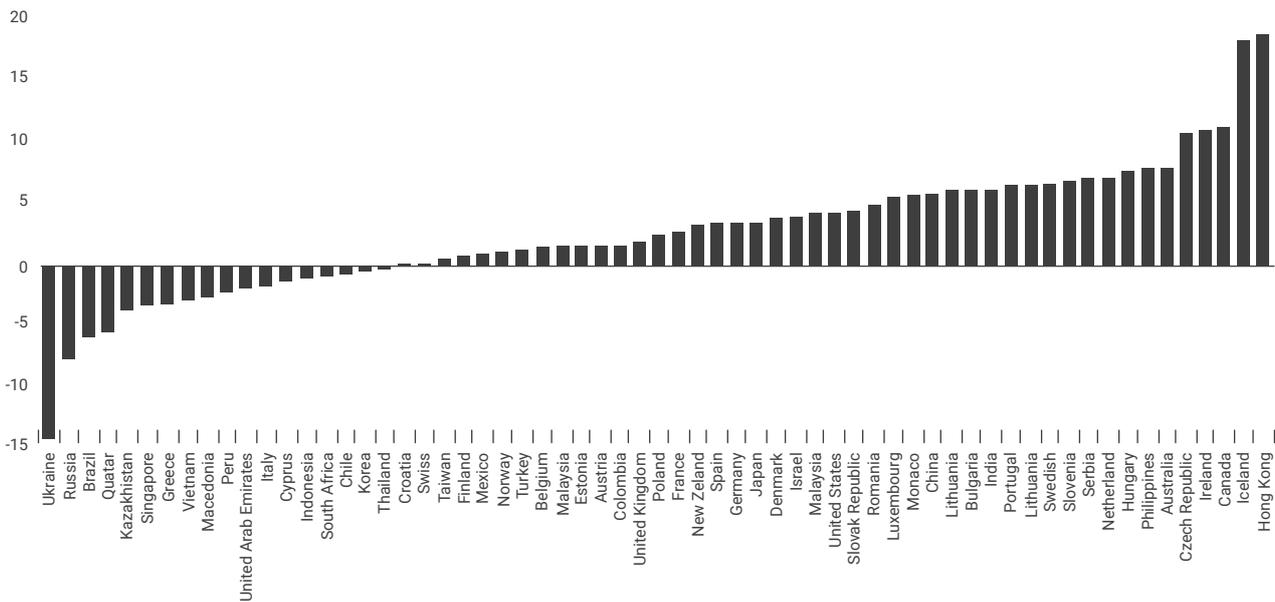
Source: IMF, OECD

The direction of global housing prices has varied by countries and cities since 2008. Some cities reached pre-crisis prices faster while others continued to have difficulties[135].

Housing and related components are analyzed in more detail since 2008, the starting point of the crisis and the need arose to study the issue, not only in terms of "real estate pricing and sales" but also in terms the health of the financial system. The Bank for International Settlements (BIS) made the following remarks in its 2014 study.

The global housing market is maintaining its buoyancy and upward trend. However, in some countries, the rise and speed of prices bring with them a price surge anxiety. (i.e., Dubai, China, New Zealand, Ireland and Canada). Some countries (such as China) introduced arrangements that will prevent the formation of a possible bubble to stop increase rate of housing and other asset prices. A surge in asset prices can also have an impact on the soundness of financial organizations (i.e., banks and other financial institutions) that provide financing for the asset. Consequently, stability loss in the finance sector may result in deterioration in the overall economic structure[136].

As a result of rapid price increase following the observations by the BIS in June 2014, almost all of the potentially risky countries made price adjustment or public regulations, which were reflected on real estate prices in 2015. Following the crisis of 2008, decision-makers try to be quite cautious about global assets, and especially, home prices. The global housing market witnessed a cautious optimism also in 2016. We can foresee a similar trend for 2018. However, regional or city-based differentiation in the global housing market can be more intensified throughout 2018.

3.3. Housing Prices Across Turkey

A home is not only a factor of wealth: it is also one of the most significant determinants in the cost of living for the household. The price of a home represents a different value than just the total of the housing services it provides[137].

Changes in economic life lead to a necessity for easily interpreting them. The construction industry, and in its core, the housing sector, acts as a barometer of the economy. As a result, price-related changes can be crucial with regards to macroeconomic decision-making processes.

Moreover, the house continues to be a traditional, reliable, and sound investment tool in Turkey. Housing demand from many middle-income people can be maintained by achieving greater national income, further improvement in income distribution, good management of expectations, and effective general risk management.

Price is the first aspect considered by those in the housing business. Indexing is one of the best methods for monitoring price changes in housing, or more precisely, asset prices.

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135   https://blog-imfdirect.imf.org/2017/03/27/chart-of-the-week-global-house-prices-where-is-the-boom/April 12,2017
136   Bank for the International Settlements (BIS), "Annual Report, 84th." Basel, June 29, 2014, p. 85–95
137   Büyükduman, Ahmet, (An Urban Legend, Housing Bubble), Scala Publishing, Istanbul. 2014. p.102

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In our country, data set on housing pricing or changes is unfortunately not at the desired level. A growing market, and as a consequence, rising interest in the market makes it necessary to keep track of more characteristic data. And many developed countries keep statistics with a long history. In addition, also universities and private institutions in some countries keep statistics on price, occupancy/vacancy rates, and rent variables. We should remember that running analyses based on such data would be healthier.

Our country does not have a data set describing market-price based price and rent indices and vacancy durations.

Since 2010, the CBRT filled a crucial gap by establishing two indices regarding housing prices in Turkey. These are the "Turkey Housing Price Index" and the "Turkey New Housing Price Index[138].

One of the most critical issues in housing prices and appraisal is that prices of home with similar features may vary drastically by neighborhood since a home is not a "homogeneous" asset. The price of a house in the same neighborhood or street may also change depending on whether it has a sea view, it faces south, it is near parking, etc. For the above-mentioned reasons, the CBRT uses a method to reduce such deviations when making calculations across Turkey[139].

3.3.1. Assessment of Turkey's House Price Dynamics in 2017

The following points stand out when we look at the price and important dynamics affecting it in 2017[140].

- In 2017, house sales across Turkey rose by 5.1% compared to the previous year. However, the number of mortgage sales and their share of total sales generally increased across Turkey albeit limited compared to the previous year despite a hike in the interest rates of housing loans. However, we saw that the mortgage sales declined in some cities, especially in big ones including Istanbul and Ankara.

- The number of building occupancy permits and the sale of second-hand houses rose over the previous year, but the building occupancy permits were higher than the first-hand house sales in 2017 as in the previous years. On the other hand, foreigners' house purchases surged compared to the previous year due to the effects of legal regulations such as citizenship and VAT exemption.

- However, the Hedonic House Price Index (HHFE) fell by an average of 0.6% in real terms in 2017. This development is thought to influenced by the decision

not to reflect rising construction costs in prices, and the price corrections in some regions, especially Istanbul, which saw rapid price increases previously.

- In Turkey, the annual rate of increase in the HHPI appeared to be higher than that of rent. However, payback periods of housing investments got shorter in Istanbul due to a slowdown in the rate of increase in prices. On the other hand, housing price increased in Izmir due to immigration and similar demographic changes, urban transformation, branded housing projects, large infrastructure projects making their payback periods longer.

The increase in interest rates of housing loans in 2017 seems to reduce mortgage sales[141]. The search data from Google Trends, an important analysis indicator for consumer preferences, also verify this development.

Under HPI, we assessed the relationship between the number of housing loans offered by banks and the 12-month moving averages of index values generated through Google Trends with the keyword "konut kredisi" (housing loan). We see that the rate of increase in Google Trends "Konut Kredisi" search volume index slowed from the second quarter of 2017, whereas the value in the number of housing loans slowed down from the third quarter of the year. Starting in mid-2016, the Google Trends volume index appears to have tracked the number of HPI in advance. Accordingly, the number of housing loans offered is expected to see an annual decline in the first months of 2018[142].

Housing Loan Search Volume Index and the Amount of HPI Loans
(Annual % Change, 12-Month Moving Average)
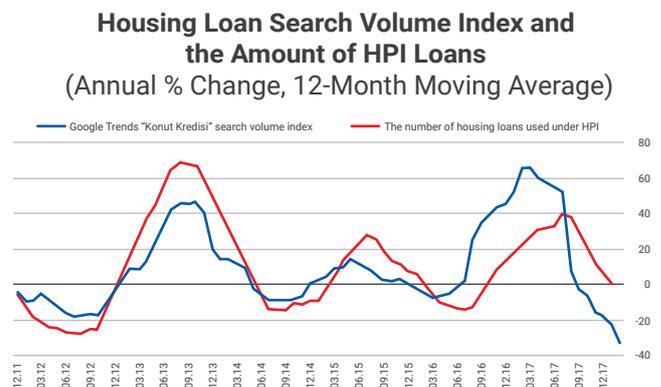
Source: Google Trends and CBRT

The relationship between housing loan interest rates and the annual percentage changes of the Hedonic House Price Index (HHPI) shows that the interest rates of housing loans rose since from May 2017 while the rate of increase in the annual HHPI percentage change slowed down in the same period.

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138   While making the index calculations, the CBRT makes an effort to establish more realistic prices by taking into account home appraisal reports.
139   The CBRT applies the "weighted average price" method to minimize price variances.
140   CBRT, "Housing Price Index, Year-end Evaluation Report-2017", p.2
141   You can find detailed information about interest market, housing loans and mortgage sales in the second part.
142   CBRT, "Housing Price Index, Year-end Evaluation Report-2017", p.4

Housing Loan Interest Rates and Change in HHPI (%)
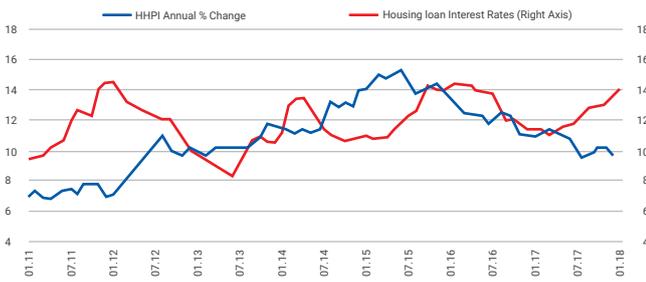
Source: CBRT

Hedonic Housing Price Index by Regions-2017

Level	Cities	Nominal % Change	Real % Change
TR32	Aydın, Denizli, Muğla	19.3	6.6
TR31	İzmir	18.5	5.9
TRB1	Bingöl, Elazığ, Malatya, Tunceli	17.3	4.8
TR21	Edirne, Kırklareli, Tekirdağ	17.2	4.8
TR83	Samsun, Çorum, Amasya, Tokat	16.0	3.7
TR22	Balıkesir, Çanakkale	15.7	3.4
TR41	Bursa, Eskişehir, Bilecik	15.0	2.8
TR90	Artvin, Giresun, Gümüşhane, Ordu, Rize, Trabzon	13.7	1.6
TR81	Zonguldak, Bartın, Karabük	12.0	0.0
TR71	Nevşehir, Niğde, Aksaray, Kırıkkale, Kırşehir	11.5	-0.4
TR33	Afyonkarahisar, Kütahya, Manisa, Uşak	11.5	-0.4
TRB2	Van, Bitlis, Hakkari, Muş	11.2	-0.7
TR82	Çankırı, Kastamonu, Sinop	10.5	-1.2
TRA1	Erzurum, Erzincan, Bayburt	10.5	-1.3
TR72	Kayseri, Sivas, Yozgat	10.3	-1.4
TR42	Bolu, Kocaeli, Sakarya, Yalova, Düzce	10.2	-1.5
TR62	Adana, Mersin	10.1	-1.6
TR	**Türkiye**	**9.8**	**-1.9**
TR52	Konya, Karaman	9.7	-1.9
TR61	Antalya, Burdur, Isparta	7.9	-3.6
TRC2	Diyarbakır, Şanlıurfa	7.0	-4.4
TR51	Ankara	6.9	-4.4
TRA2	Ağrı, Ardahan, Kars, Iğdır	6.9	-4.5
TRC1	Kilis, Adıyaman, Gaziantep	6.5	-4.8
TR63	Hatay, Kahramanmaraş, Osmaniye	5.8	-5.5
TR10	İstanbul	5.0	-6.1
TRC3	Batman, Mardin, Siirt, Şırnak	1.1	-9.6

Source: CBRT

On the other hand, we reveal the following dynamics if we look at region-based price changes for 2017.

According to calculations on the basis of the HHPI, housing prices in Turkey rose by 9.8% in nominal terms while declining by 1.9% in real terms in December 2017

compared to the same month of the previous year. An evaluation of the developments in Housing Prices Statistical Regional Units Classification-Level 2 shows an increase in real terms in nine out of 26 levels in contrast to a decrease in real terms in 17 other levels, including major cities like Istanbul and Ankara[143].

When we look at overall Turkey in 2016 and 2017, we can refer to a certain price movement despite the developments in these years.

The average annual nominal increase in HHPI appeared as 12.3% and 10.5% in 2016 and 2017, respectively. According to a level-based analysis, the first three levels that showed a lower increase in 2017 compared to the previous year included TR10 (Istanbul), TR42 (Bolu, Kocaeli, Sakarya, Yalova, Düzce) and TR61 (Antalya, Burdur, Isparta), whereas the first three levels that showed an increase more than the previous year included TRC1 (Kilis, Adıyaman, Gaziantep), TRB2 (Van, Bitlis, Hakkari, Muş) and TR82 (Çankırı, Kastamonu, Sinop)[144].

Changes in HHPI by Level
(%, Annual Average)
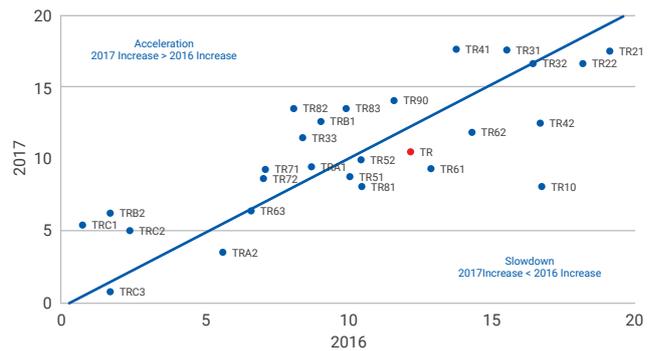
Source: CBRT

Based on the above data, square meter sizes that can be taken on the basis of stratified regions across Turkey in 2017 are as follows;

According to the Statistical Regional Units Classification-Level 2 shows based on the house values for the period December 2017, we see that the largest houses could be purchased at 300,000 TRY for 287 square meters on TRA2 (Ağrı, Ardahan, Kars, Iğdır) level. This level was followed by TRC3 (Batman, Mardin, Siirt, Şırnak) with 280 square meters and TRB2 (Van, Bitlis, Hakkari, Muş) with 240 square meters, respectively. We see that the smallest houses could be purchased with 78 square meters at level TR10 (Istanbul) with the same amount, and it was followed by TR 114 (Izmir) with 114 square meters and TR 32 (Aydın, Denizli, Muğla) with 128 square meters[145].

143   ibid, p. 5
144   ibid, p. 7
145   ibid, p. 8

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Square Meters that can be Purchased for 300,000 TL

Source: CBRT

3.3.2. Price Changes as of January 2018

Calculated with the layered median price method to track housing market price changes, Housing Price Index (HHPI) (2010=100) rose by 0.6% in nominal terms in January 2018 compared to the previous month and by 10.12% compared to the same month of the previous year. Real change dropped by 0.21% annually[146].

Another important point in house price analysis is the trend and change in square meter prices. As of January 2018, the average house price per square meter in Turkey stood at 2118.50 TRY. As for the three big cities, this value was 3881.62 TRY in Istanbul, which was followed by Ankara with 2673.35 TRY and Izmir with 1719.65 TRY.

Unit Prices
Square meter, Turkey and Three Major Cities,
January 2010-2018
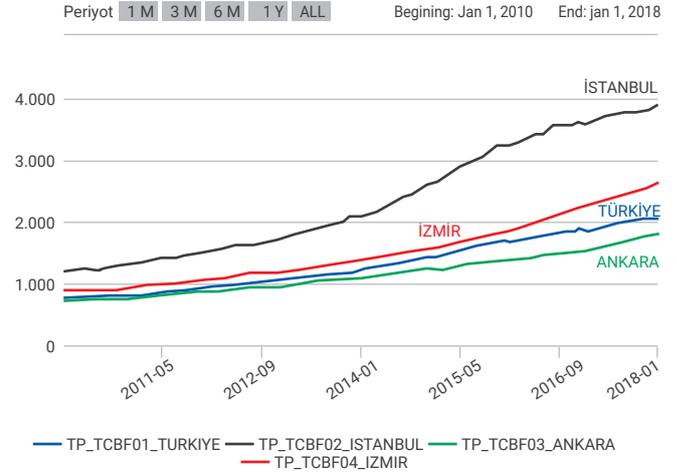
TP_TCBF04_TURKIYE: Türkiye Housing Unit Prices - TL/m², Housing Unit Prices (TCMB), Left Axis
TP_TCBF02_ISTANBUL: İstanbul Housing Unit Prices - TL/m², Housing Unit Prices (TCMB), Left Axis
TP_TCBF03_ANKARA: Ankara Housing Unit Prices - TL/m², Housing Unit Prices (TCMB), Left Axis
TP_TCBF03_IZMIR: İzmir Housing Unit Prices - TL/m², Housing Unit Prices (TCMB), Left Axis

Source: CBRT

The table below presents one-year course of the House Price Index (HPI), Hedonic House Price Index (HHPI), new and non-new house indices. Accordingly, as of January 2018, HPI and HHPI rose by 10,27% and 10,12%, respectively. On the other hand, New House Price Index and Non-New House Price Index surged by 10,45% and 9,58%, respectively.

Hedonic Price-based Annual Change
(January 2018)

Source: CBRT

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146   CBRT, "House Price Index-June 2018, p.1

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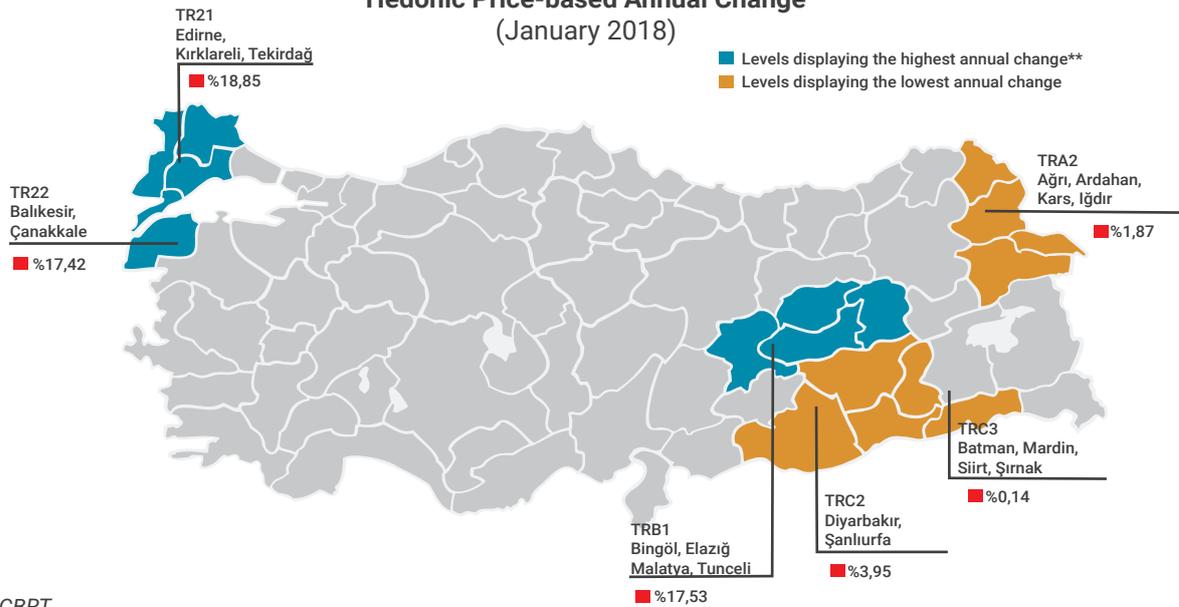
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Change in Price Indices[147]
(As of January 2018)

	Hedonic House Price Index	Hedonic Price Index*	Unit Price (TRY/sqm)	New Hedonic House Price Index	Non-New House Price Index
Türkiye	216,12 (%10,12)	252,09 (%10,27)	2.118,50 TL	240,11 (%10,45)	250,85 (%9,58)
İstanbul	266,16 (%4,72)	300,39 (%5,61)	3.881,62 TL	302,66 (%7,56)	292,84 (%5,10)
Ankara	192,95 (%6,84)	197,98 (%6,00)	1.719,65 TL	220,76 (%6,32)	192,87 (%6,00)
İzmir	246,68 (%16,87)	272,15 (%17,09)	2.673,35 TL	274,92 (%20,12)	272,17 (%17,22)

Source: CBRT

The rise in house price indices has lost momentum in the past year. Index values rise below inflation showing a decline in real terms.

A comparison of the Turkish House Price Index (THPI) and house price indices of the three major cities (Istanbul, Ankara, Izmir) shows that Istanbul has seen a decrease in the rate of increase for the past after eight years of the rapid upward movement. Izmir showed the fastest increase last year among the three big cities. Ankara appears to have a moderate increase due to the lowest price growth among the three big cities.

Housing Price Index and Three Major Cities
(January 2010-2018)

Period 1 M 3 M 6 M 1 Y ALL   Beging: Jan 1, 2010   End: Jan 1, 2018
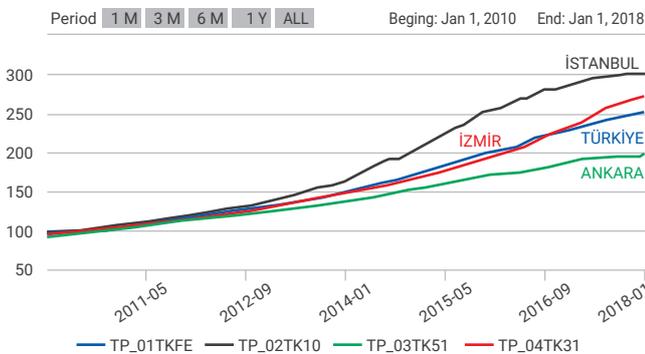
TP_01TKFE: Türkiye New House Price Index (TKFE, House Price Index (KFE) (2010=100) (TCMB), Left Axis
TP_02TR10: TR 10 (İstanbul), House Price Index (KFE) (2010=100) (TCMB), Left Axis
TP_03TR51: TR 51 (Ankara), House Price Index (KFE) (2010=100) (TCMB), Left Axis
TP_04TR31: TR 31 (İzmir), House Price Index (KFE) (2010=100) (TCMB), Left Axis

Source: CBRT

The following points are remarkable regarding the one-year change of the New Housing Price Index. As of 2017, the new house price indices showed a quite gradual increase. Izmir had the highest rate of increase whereas the rate of increase in Istanbul fell considerably. Ankara recovered from the decline in 2016 following a moderate upward trend for the past one year.

New Housing Price Index and Three Major Cities
(January 2010-2018)

Period 1 M 3 M 6 M 1 Y ALL   Beging: Jan 1, 2010   End: Jan 1, 2018
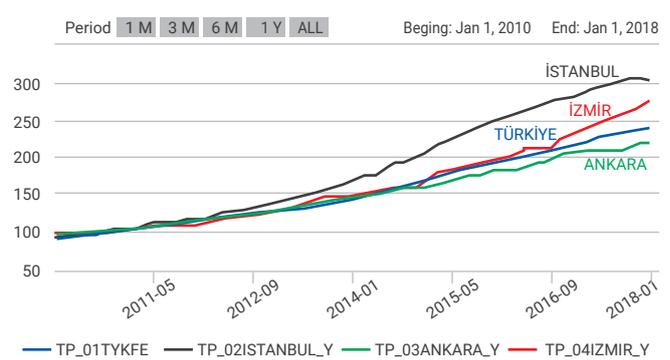
TP_01TYKFE: Türkiye New House Price Index (TYKFE), New House Price Index (YKFE) (2010=100) (TCMB), Left Axis
TP_02ISTANBUL_Y: İstanbul New House Price Index, New House Price Index (YKFE) (2010=100) (TCMB), Left Axis
TP_03ANKARA_Y: Ankara New House Price Index, New House Price Index (YKFE) (2010=100) (TCMB), Left Axis
TP_04IZMIR_Y: İzmir New House Price Index, New House Price Index (YKFE) (2010=100) (TCMB), Left Axis

Also, we should not overlook the quality and the value that arises from it when examining the price movements in the real estate and housing industries. As stated in the above sections; quality, changing requirements, innovative solutions by construction materials industry all affect consumer preferences.

According to the study[148]; housing market fluctuations play an important role in the decision-making process of policy-makers and require housing prices to be followed with a reliable statistical indicator. However, current price indices may also include the effects of the increased quality aspect leading to misinterpretation of the house price increases.

Hedonic House Price Index is calculated through the hedonic regression analysis to separate it from the quality impact of the housing price index that is calculated by the CBRT. According to results, approximately one-fourth of the nominal increase in the house prices across Turkey and approximately half of the real increase can be said to result from quality increases.

Hedonic House Price Index (HHPI) (2010=100) is calculated to monitor price changes adjusted for quality influence by checking the characteristics of houses in Turkey occasionally. The index (2010=100) experienced a balanced increase in 2017. In Istanbul, the HHPI value started to stabilize relatively. As seen in other indices, İzmir recorded the fastest increase among the other cities.

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147   Housing Price Index (THPI) (2010=100) is calculated by using the weighted average price in the appraisal reports that are prepared when the banks issue a mortgage for the house in question. The index is created for entire Turkey and is also provided at Level 2 of the Nomenclature of Units for Territorial Statistics. Relevant data is available on
http://www.tcmb.gov.tr/wps/wcm/connect/TR/TCMB+TR/Main+Menu/Istatistikler/Reel+Sektor+Istatistikleri.
148   Hülagü Timur, Kızılkaya Erdi, Özbekler Ali, Tuna Pınar, "Economy Notes - Adjustment of the Turkey Housing Price Index from Quality Change Effect" CBRT, Issue: 2016-02, February 1, 2016, p.10

Hedonic Housing Price Index and the Three Big Cities
(January 2010-2018)

TP_HKFE01: Hedonik Konut Fiyat Endeksi (HKFE),
Hedonik Konut Fiyat Endeksi (HKFE) (2010=100) (TCMB), Sol Eksen
TP_HKFE02: TR 10 (İstanbul), Hedonik Konut Fiyat Endeksi (HKFE) (2010=100) (TCMB), Sol Eksen
TP_HKFE03: TR 51 (Ankara), Hedonik Konut Fiyat Endeksi (HKFE) (2010=100) (TCMB), Sol Eksen
TP_HKFE03: TR 31 (İzmir), Hedonik Konut Fiyat Endeksi (HKFE) (2010=100) (TCMB), Sol Eksen

Source: CBRT

As for a summary of January 2018 on the basis of hedonic prices; the Hedonic House Price Index (HHPI) (2010=100) is calculated to monitor price changes adjusted for quality influence by checking the characteristics of houses in Turkey occasionally. The index stood at 216.12 in January 2018 with a quarterly increase of 0.60%[149].

Annual Real Hedonic Price Change
(2015-2018)
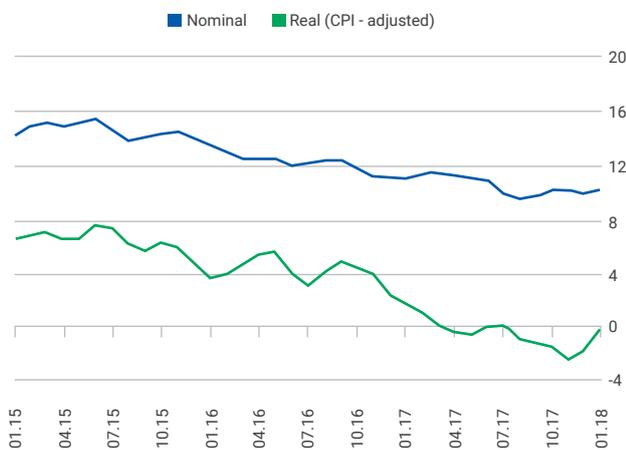
Source: CBRT

The HHPI surged by 10.12% year-on-year while falling by 0.21% in real terms.

3.3.3. Analysis of Housing Prices in Turkey

As is the case for all other asset prices, it is not a good analysis method to look at only "one asset price at a certain time" to ascertain whether the price rose or fell excessively. Price formation is based on similar prices and/or on present conditions. As prices develop, they become affected by a number of variables, which have already been explained in this study.

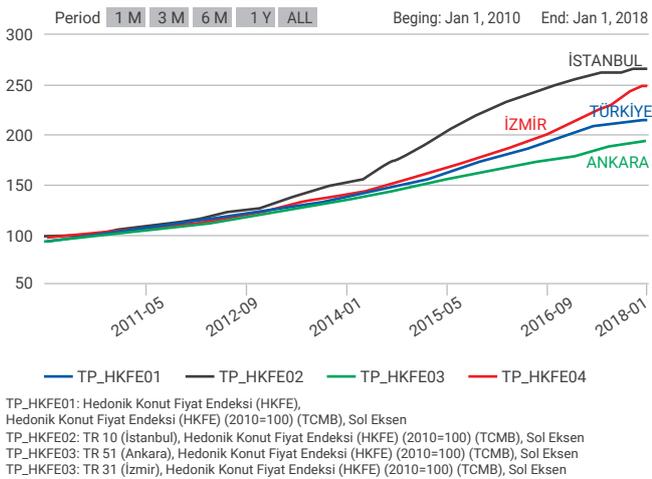In the last few years, the term "bubble" or "inflation" has frequently been used around the world for the prices of many commodities such as homes, wheat, petroleum, gold, and stocks. In terms of price, the opposite is also possible. Some assets may be described as "excessively low priced" or "cheap." The notion of "normal" may vary in asset prices, depending on the time and expectations, which is what we have tried to explain in previous parts. Crude oil prices are one of the most typical examples of this. A few years ago, prices around $20 used to be considered normal, whereas the $60-70 is accepted to be ordinary levels.

Regardless of the asset type, one should not examine only price development and trends to understand the excessive price inflation-bubble concepts. However, analyses generally focus on the concept of price since it is the easiest to interpret value factor for the public opinion.

Simply speaking, to better understand whether a housing price bubble exists in Turkey, and particularly in Istanbul, the main dynamics of the supply and demand structure must be re-analyzed.

Prices fluctuate as supply has a delayed reaction to demand in the construction and particularly the housing sector. For that reason, instabilities (shocks) that affect prices in the housing market are primarily demand-related. The following can be said in terms of rising or declining demandr[150];

- Rising demand will increase the price of real estate and the rent value, and consequently, the potential for profits. In this case, there will be more demand for housing from investors.

- Heightened demand will improve the housing sector's presently non-increasing occupancy rates. The surge in occupancy rates will boost rents and sales prices.

- There will be a decline in occupancy rates as the supply has a delayed reaction to demand.

- As housing demand booms, occupancy rates decline, which in return creates a gradual drop in rents and sales prices. In reality, nominal prices do not fall; however, since rental properties stay on the market longer, non-payment periods occur in rent incomes (it must be remembered that houses that remain empty without receiving rent create an alternative as well as a cost for the owner). Supplier's loans are provided in an effort to prevent nominal prices from falling.

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149   CBRT, "House Price Index-January 2018, p.3
150   Büyükduman. Ahmet ibid. pp. 87-88 and McKenzie. D, Richard. J, Betts. M, "Essentials of Real Estate Economics" 5th Publishing, Thomas S. West, 2006, pp.95-97

- Since lower prices and rents will reduce profits, fewer investors will come to the housing sector.
- In the event that prices fall along with other economic assets, demand deteriorates even faster.

These variables have a considerable impact on the rate of increase or decrease in demand. Factors that accelerate the drop in demand need to be looked at as well.

- The duration and rate of non-occupancy in houses rise in line with lower demand[151].
- When the non-occupancy rate rises, rents, and sales prices decline.
- When low rent or sales prices reach a certain point, a new balance, and thereby price, is created as demand rises again.

A number of factors such as current economic conditions and economic and social expectations determine the new balance price in the housing sector in comparison to the previous one. The demand recovery and the return of prices to market levels in Turkey took place faster than in developed countries although housing prices showed a downtrend with the economic slowdown and contraction after the 2008-2009 crisis.

The notion of the housing bubble as a financial asset was analyzed in detail in our previous reportsr[152]. The economic and sectoral analyses in the previous parts confirm the lack of a bubble covering the whole Turkish housing industry.

Just to provide a recap of the term 'bubble': In his Istanbul presentation on June 17, 2014, Professor R.J. Shiller[153] (2013 Nobel Laureate in Economics) from Yale University explained that a bubble emerges in housing markets in which real prices come close to or exceed 100% for a consecutive five years.

Accordingly, we cannot refer to an excessive increase in Turkey House Price Index or Hedonic House Price Index considering the data announced by the CBRT. Price increase analysis by region and city shows that a price bubble does not exist in Turkey, in general; some regions, however, are approaching a balloon ('bubble' as we previously indicated). We can say that many countries of the world face a similar situation.

We analyzed in our housing prices analysis the real price increases from January 2013 to January 2018 to study the notion of 'bubble' mentioned by Shiller[154].

- Housing prices across Turkey (HPI) increased in real terms by 45.49% on average between January 2013

and January 2018. The new housing price index achieved a 38.57% real price increase in the same period. These data show that the market is far from an 'asset bubble.' Both indices have seen an acceptable growth rate. Increases in the indices can also be interpreted as the industry maintains its buoyancy and that the demand has a reasonable course.

- In this period, the real price increase was 69.48% in Istanbul, Turkey's most important housing, and real estate market. Istanbul was followed by Aydın-Denizli-Muğla region and then by Izmir with 64.27% and 59.23% increases, respectively.
- Izmir indicated the second-best performance among the three major cities. Real prices rose by leaps and bounds reaching 59.23% between January 2013 and January 2018.
- On the other hand, Ankara, the capital city, posted the most moderate price movement among the three major real estate markets due to a gradual increase. Real prices rose by 14.25% between January 2013 and January 2018.
- We see effects of the summer resorts and coastal towns in price changes calling this 'summer house and immigration effect.' The most typical examples are Antalya, Denizli, Aydın, and Muğla.
- The ongoing 'Gulf effect' and periodic motives seem to have supported the price increase in the Black Sea region. The real price increase in Artvin-Giresun-Ordu-Rize-Trabzon region stood at 38.36% between January 2013 and January 2018. Here, the share of foreign purchases in Trabzon has proven effective.
- It should be noted that there may be price changes in different districts, neighborhoods, and streets of the same cities as all the evaluated data point to an increase in the average price.

We reach significant data regarding trends if we analyze seasonal price changes. We can make the following evaluation regarding the regional trends of the real price changes occurring in the past six months by examining the table below;

- The overall price increases in Turkey materialized as 1.46% for the period January 2013-January 2018 as opposed to the period June 2012- June 2017. On the other hand, the new house prices rose by 2.43%. The rate of increase declined both in the Turkish Housing Price Index and the New Housing Price Index. On the other hand, we observe that cost increases lie behind slightly higher price increase of the New Housing Price increase.

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151   Non-Occupancy Rate and Duration: The waiting period that occurs after the real estate is put on the market for rent or sale.
152   Overview of the Real Estate and Housing Industry, 'Emlak Konut REIC,' June 2015 and January 2016
153   R.J. Shiller was awarded the Nobel Prize for his work on asset prices.
154   In this method, Shiller looks at the real price increases for the last five years for the concept of the real estate bubble referring to this concept in cases where this growth is close to or over 100%..

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Nominal/Real Housing Price Changes in Turkey
(January 2013-January 2018)[155]

Region/City	Price Index for January 2013	Price Index for January 2018	January 2013-January 2018, 5-year Nominal Price Increase	January 2013-January 2018-5 Real Price Increase
	(%)	(%)	(%)	(%)
Turkey Housing Price Index	130,06	252,09	122,03	45,49
Turkey New Housing Price Index	128,65	240,11	111,46	38,57
İstanbul	135,65	300,95	164,74	69,48
İzmir	129,15	272,15	143	59,23
Ankara	123,62	197,98	74,36	14,25
G.Antep Kilis Adıyaman	170,06	246,35	76,29	15,52
Van Bitlis Hakkâri	123,07	190,54	67,47	9,7
Artvin Giresun Ordu Rize Trabzon	120,22	213,36	111,14	38,36
Konya Karaman	136,24	241,07	104,83	34,22
Aydın Denizli Muğla	125,61	276,29	150,68	64,27
Antalya Burdur Isparta	127,9	246,97	119,07	43,55

Source: Calculated According to the CBRT Data.

- Although Istanbul continues to rank first in terms of nominal price increase, it indicated a negative real price increase recording an 8.51% loss in January 2013-January 2018 period compared to June 2012-June 2017 period. This price movement can be seen as a price correction as we emphasized in the previous report. Such occasional price fluctuations in asset prices can be regarded as balancing in terms of market dynamics.

- Among the three big cities, Izmir's housing market achieved the fastest real price increase in January 2013-January 2018 period. Real housing price increases in Izmir materialized as 9.39% for the period January 2013-January 2018 compared to the period June 2012- June 2017. The branded housing projects in Izmir and the immigration from other major cities had an effect on the prices.

- Ankara suffered a 0.45% loss in real terms with a price change below Turkey's average between the two relevant periods. However, one should not overlook that there is a slowdown in the real price elasticity in Ankara. The prices reflect the increase in housing supply in Ankara and the impact of immigration to other cities.

- We see an interesting price correction in Gaziantep, Kilis, and Adıyaman regions. Posting the highest price increase until 48 months ago, this region saw a slowdown in the price increase in the last five years with a real decline of -9.78% between the last two periods. In the two-year period, the price decline in this region stood at nearly 30%. Gaziantep, Kilis and Adiyaman region saw the fastest real price decline. Other than the market's rational effort to balance supply and demand, this situation can be interpreted as the impacts of lower demand due to less migration.

- Van-Bitlis-Hakkari region saw 4.48% real price increase for the January 2013-January 2018 as opposed to the period January 2012-January 2017. The region seems to have compensated for the negative price increase in the previous periods with an almost 10% real price increase over the last year. However, real price increases in this region are still well below the national average.

- Artvin-Giresun-Ordu-Rize-Trabzon region saw a 16.28% increase in the period January 2013-January 2018 compared to June 2012- June 2017. The fastest real price increase was seen in Artvin, Giresun, Ordu, Rize and Trabzon region. We can think that the demands of foreigners and the recovery led by TOKİ's construction activities in the region affected this trend.

- Becoming one of the regions with the fastest uptrends in price increase rates in the previous report period, Aydın, Denizli and Muğla region saw a 2.33% real price decline between January 2013 and January 2018. The recovery in the tourism industry in the previous period, the impact of the summer season and domestic investors' demands seem to be influ-

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155   Real price changes show the inflation-adjusted price increase/drop for the relevant period. Inflation values were obtained from the http://www3.tcmb.gov.tr/enflasyoncalc/enflasyon_anayeni.php website with the January 2013-January 2018 period taken as the basis

ential in these regions. However, we see that rapidly increasing prices have made a slight correction with seasonal effects. On the other hand, ease of travel from Istanbul to the relevant cities thanks to the transportation investments in especially the Aegean region has a potential to create a demand recovery after a certain while

Real Price Changes across Turkey and Specific Regions, Periodical Difference

Region/City	January 2012-January 2017-5 Real Price Increase	June 2012-June 2017, 5-year Real Price Increase	January 2013-January 2018-5 Real Price Increase	Real Price Change (Difference) between June 2012-2017 and January 2013-2018
	(%)	(%)	(%)	(%)
Turkey Housing Price Index	43,09	44,03	45,49	1,46
Turkey New Housing Price Index	35,72	36,14	38,57	2,43
İstanbul	78,63	77,99	69,48	-8,51
İzmir	44,69	49,84	59,23	9,39
Ankara	17,22	14,7	14,25	-0,45
G.Antep Kilis Adıyaman	30,94	25,3	15,52	-9,78
Van Bitlis Hakkâri	2,65	5,22	9,7	4,48
Artvin Giresun Ordu Rize Trabzon	19,19	22,08	38,36	16,28
Konya Karaman	36,18	32,82	34,22	1,4
Aydın Denizli Muğla	56,07	66,6	64,27	-2,33
Antalya Burdur Isparta	40,8	43,1	43,55	0,45

Source: Calculated According to the CBRT Data.

• The real price increases in Konya, Karaman region, materialized as 1.4% for January 2013-January 2018 compared to June 2012-June 2017. This region can also be said to have experienced a correction movement in its own dynamics.

• Antalya-Burdur-Isparta region had poor price outlook in the past one year. There was a 0.45% increase in real terms between June 2013 and June 2018 compared to the January 2012-January 2017 period.

The Turkish housing market makes occasional corrections to the price depending on its own dynamics. This process can be considered a market mechanism that prevents the formation of "bubbles." Comparing the bubble formation concept in different countries with the actual price movements in Turkey will provide a more concrete analysis. According to this;

a.**US Mortgage Crisis:** As mentioned in the above sections, we can refer to the bubble concept or excessive price increases if the real price increase is close to 100% or exceeds it. The crisis broke out in 2008 when the real price increase reached 73%. However, the 2008 crisis stemmed from not only due to such an increase in house prices but also simultaneous declines in excessively risky securities prices as well as troubles regarding the credit mechanism and banking industry. As of 2017, house price increases came closer to the previous real level as but the crisis does not emerge as the other economic and socio-psychological effects look positive.

Case-Shiller Home Price Indices and US Consumer Prices
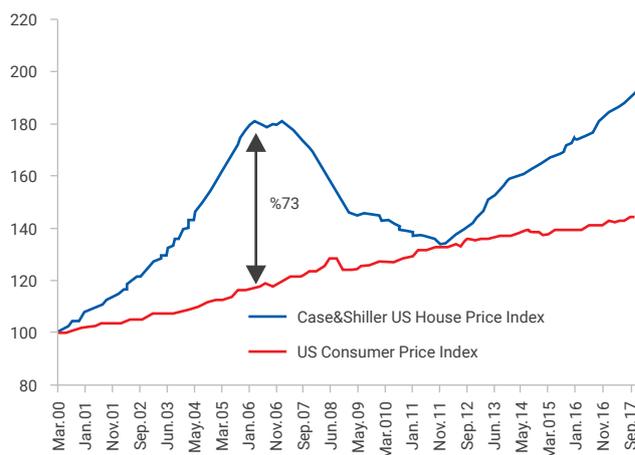
Source: Reuters and Isbank

House prices in the US began to decline rapidly after the peak in 2006, and the housing bubble burst with the outbreak of the 2008 global financial crisis. After the correction, housing prices in the country have started to rise again since April 2012. In recent years, housing demand has been rising in parallel

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with the improving US economy, the decline in the unemployment rate, higher incomes, the liquidity provided by the Fed to the market and still low-interest rates. In addition, the trading of housing-based financial assets in global markets cause speculative price movements. Accordingly, it is observed that the gap between inflation and housing prices extends again giving the impression that a new bubble is forming in the real estate market[156].

b.Spanish Housing Crisis: Also, Spain suffered one of the most critical housing market crises in the EU. The real price increase before the global crisis reached 89% to be followed by a sharp correction. Financial leverage and the banking system also served as catalysts in the crisis.

Spanish Housing Industry
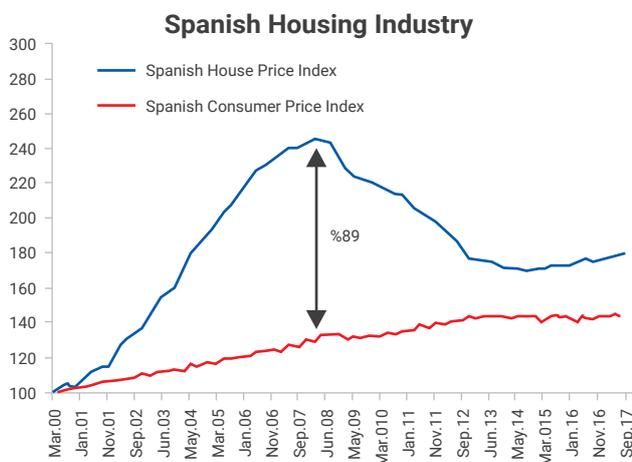
Source: Reuters and Isbank

As can be seen in the calculations in the above section, the inflation-adjusted value of Turkey House Price Index shows a 45.49% increase. The rate is 38.57% in new houses and far from the concept of a price bubble. However, it will be appropriate to follow both costs and real price increases carefully.

We see that the housing market strives to seize a dynamism and equilibrium prices as much as possible considering the house prices across Turkey. In this sense;

- The Turkish Housing Market's sub-markets demonstrate dynamic and rational trends. In particular, price movements demonstrate adjustment and increases when necessary. One of the sub-markets with adjustments is the Gaziantep, Kilis, Adıyaman and Istanbul region while the Artvin, Giresun, Ordu, Rize, Trabzon and Izmir region is the most typical example of increase.

- The fact that contractors increases and decreases construction licenses according to market expecta-

tions dynamically. Construction license and occupancy permit numbers may occasionally go beyond the normal value than the expectations of the contracts due to the delayed reaction of the supply.

- Giving increasingly rational decisions, the consumers evaluate many factors such as building quality, materials, ease of transportation and corporate structure of the contractor.

- We see that the effects of the July 15 were dealt with quickly. At this stage, the campaigns of the branded house manufacturers (such as Emlak Konut REIC and GYODER members) made important contributions to creating positive expectations and boosting morale in the industry. The launch of similar campaigns in different scales from time to time accelerates not only the branded housing producers but also the entire industry.

- The favorable periodic loans provided by the banking industry to the final consumers and the financing models jointly formed by corporate firms and banks benefit the industry considerably.

- Foreign investors not only look at the quality and quantity of housing but also consider the city as a "life center," which is a remarkable aspect. The most typical example is the house sales to the foreigners in Istanbul.

3.3.4. Cost-Price Developments in Last One Year

When examining the concept of real estate, it is beneficial to look at not only the prices on the market but also the underlying costs assumed for manufacturing. Based on the cost elements we described in detail in the previous chapters: the building construction cost index (BCCI) rose in the fourth quarter of 2017 by 6.5%, 22.8%, and 19.7% on a quarterly basis, year-on-year basis, and based on the averages of four quarters, respectively. In the fourth quarter of 2017, the labor index and material cost index rose by 1.8% and 7.9% on a quarterly basis in BIME (Building Construction Cost Index). The labor and material indices rose by 13.7% and 25.6%, respectively, compared to the same quarter of the previous year[157].

The nominal house prices in Turkey increased by 23.48% between January 2017 and January 2018. However, the real increase appears as 3.15% if we deduct the Building Construction Cost Index. The real yield based on the D-PPI (Cost Inflation) is 10.11%.

The nominal increase rate for the new houses stood at 22,72% in the new period. The BCCI-reduced real price appeared as only 2.52% and the real return based on the D-PPI was 9,43%.

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156   Isbank, "Housing Industry Report", February 2018, p.24
157   TurkStat,' Building Construction Cost Index, 4th Quarter: October-December, 2017", Issue: 30566, January 19, 2018

Costs-Real Return Relation
(January 2017-January 2018)

Region City	Price Index for January 2017	Price Index for January 2018	Nominal Difference in the Past Year %	Increase in Building Construction Cost Index (BCCI	D-PPI Real Price Increase %
Turkey Housing Price Index	228,61	252,09	23,48	3,15	10,11
Turkey New Housing Price Index	217,39	240,11	22,72	2,52	9,43
İstanbul	284,43	300,95	16,52	-2,65	3,9

Source: Calculated on the basis of the CBRT and Turkstat figures.

For Istanbul, the nominal yield for the last year came in at 16.52% based on the index. The BCCI-reduced real price stood at -2.65% and the real yield based on D-PPI was 3,9%. In Istanbul, rapidly increasing costs disrupt contractors' cash flows in real terms along with housing prices with a slower rate of increase

We should note that the figures are based on an average, and they do not fully reflect cost elements such as unexpected financial costs (interest burden-funding cost) and exchange rate burden. As a result, profit margins of the industry materialize at levels lower than thought

Cost increases are reflected in sales prices to a remarkably limited extent. Contractors seem to have undertaken costs themselves to a significant extent.

3.3.5. Developments regarding Housing Depreciation (Housing Sale Price-Rent Relationship)

Another critical point in terms of housing prices is 'house depreciation,' or in other words, the time for return on investment in purchasing the house.

As of 2017, the calculation of the payback periods of housing investments (house value/annual rental value) in Turkey on the basis of house values under the HPI and "the actual rent paid by the tenant," one of the CPI subcategories released by TurkStat shows that the payback periods fell from 27, 24 and 22 years for

Istanbul, Ankara and Izmir in December 2016 to 25.5, 24.5, and 23.5 in Istanbul, Ankara and Izmir, respectively, in the same month of 2017[158].

The rental Payback period for the Three Big Cities
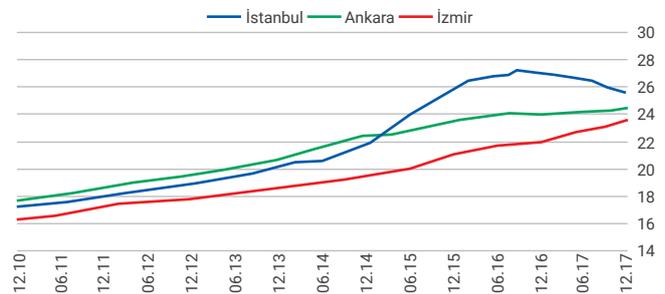
Source: CBRT

Having lost momentum in 2016, house price increases led to a shortening of the payback period. However, the demand was raised again in the second half of the year with the government's measures to support the economic activity, falling mortgage interest rates, and campaigns offered by the construction firms. In parallel, the payback period of housing investments increased again in the second half of the year. This trend continued in the first quarter of 2017, whereas the depreciation periods followed an even course in the following period. Still increasing faster than rents, house prices indicate that house purchases for investment purposes have lower appeal[159].

On the other hand, REİDİN obtained the following data based on their study. As of December 2017, Aydın, Van, and Kırklareli were the main cities with low house payback periods. On the other hand, amortization periods were remarkably high in Denizli, Afyonkarahisar, Aksaray, Kastamonu, and Trabzon. A brief look at the developments in the three major cities with the highest number of house sales shows that the return on housing investment was 20.2, 19.5 and 18.9 years in Istanbul, Ankara, and Izmir, respectively[160].

HHPI and Changes in Rents according to Levels
(% Change, 2017 Annual Avg.)
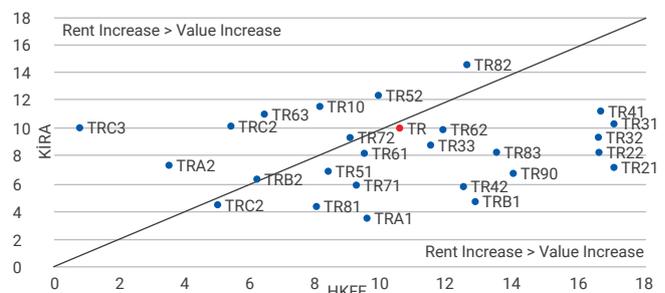
Source: CBRT

158   CBRT, "Housing Price Index, Year-end Evaluation Report-2017", p.9
159   Sezgin Aslı "Construction Sector - Economic Research Development", Isbank, February 2018, p.24
160   ibid, p. 22

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Another factor that affects real estate prices is the fact that the rate of increase in prices and changes differ drastically in terms of city and region, as well as in terms of individual city neighborhoods. A number of objective and buyer-preference-related subjective factors come into play when homes and other real estates are appraised [161]. (i.e., proximity to the center, nearby hospitals or parks, easy access, view, or new or old building)

These factors can considerably raise the value of the real estate, land or development project in question. For instance, metro or similar infrastructure investments can create great differences in value and prices[162]. Therefore, regional- and district-based price increases appear to be higher than that of general prices, creating a bubble impression when only these areas are taken into account.

From a legal perspective, newly implemented Turkish Commercial Code and new Consumer Rights Law introduced important regulations for the players directing supply and demand. The arrangements in favor of consumers increased demand-side protection which created a necessity for the construction companies to compete more effectively by forming more rational models.

Our analysis shows that there is no "balloon" in the Turkish Housing Market. However, it must be remembered that they may be price variances arising from regional differences and special demands. Turkish construction market possesses the flexibility to create a supply-demand balance with its players, who are gradually becoming more rational. It showed this flexibility when it experienced domestic and external shocks in 2001 and 2008.

3.3.6. House Price Dynamics in Three Big Cities

Developments in the three major cities determine general trends as the most important elements of the Turkish housing market. Although the above sections present certain dynamics for Istanbul, Ankara, and Izmir, the dynamics in the sub-markets of the respective cities also matter.

Annual Change of Order based on the House Prices of the Three Big Cities
(In terms of Order)
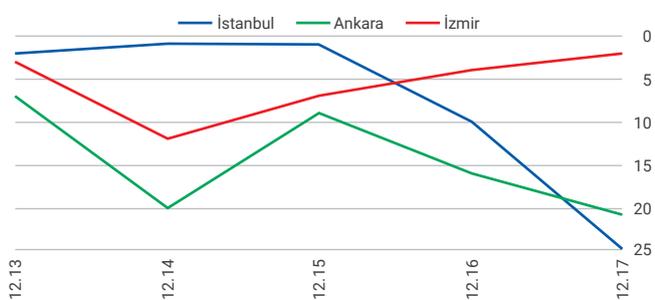
Source: CBRT

An analysis of the annual percentage change in housing prices in the three major cities for the last five years shows that Istanbul ranked first until the end of 2015 starting to lose its place in the middle of 2016 and slipping to 25th place by the end of 2017. İzmir started to rise in 2015 and took the 2nd place by the end of 2017. Ankara started to drop in 2016 to the 21st place at the end of 2017[163].

The region, district, neighborhood-related movements can occasionally cause large-scale developments that will affect the overall market.

a. İstanbul: Istanbul is the most important market of the Turkish real estate industry. It is a global city deemed very attractive both by domestic and foreign investorsr.

House Sales across Turkey and the Percentage of House Sales in Istanbul

Date/Sales	Total Sales (Units)	Istanbul Sales (Units)	Percentage of Istanbul Sales
2014	1.165.381	225.454	%19,4
2015	1.289.320	239.767	%18,5
2016	1.341.453	232.428	%17,4
2017	1.409.314	238.383	%16,9

Source: TurkStat

An examination of the sales in Turkey since 2014 shows that the total housing sales in Istanbul vary from 19.4 to 16.9%. Roughly one of every five houses sold in Turkey is bought and sold in Istanbul. Istanbul has considerable potential for such real estate transactions because it is a commercial point.

Demographically speaking, Istanbul continues to receive migration. 18.5 out of every 100 people living in Turkey reside in Istanbul. Istanbul, one of the world's most crowded cities, has approximately 1.8 times the population of London, 1.7 times that of Berlin and four times that of Paris. Leaving 145 countries behind by population, Istanbul received approximately 1 million people from 2012-2016. The city's population rose from 13,624,240 in 2011 to 14,657,434 in 2015 (13,854,740 in 2012; 14,160,467 in 2013; and 14,377,018 in 2014)[164]. Another striking demographic comparison involves the comparison of some countries with that of Istanbul. Istanbul has more population than 145 of 216 countries in the world.

According to TurkStat data, housing sales in Istanbul maintains a certain trend and buoyancy. The foreign in-

161   Alp. A, Yılmaz. U.,'Real Estate Financing and Valuation' BIST Publication, June 2007, pp.178-193
162   Türeoğlu, Ergun, (Real Estate Appraisal in the Housing Financing System),
           CMB Publications, No: 211, pp. 65-150
163   CBRT, "Housing Price Index, Year-end Evaluation Report-2017", p.9
164   http://www.milliyet.com.tr/istanbul-un-nufusuna-5-yilda-1-ekonomi-2512464/,21 August 2107, p.1

vestors are having an increasingly bigger share in these sales. The General Directorate of Land Registry and Cadastre revealed that the 6,046 and 8,483 investors purchased a total of 5,911 and 8,505 independent sections in 2014 and 2015, respectively. In 2016, foreign investors purchased 5,811 units.It is remarkable that the interest of the foreign investor continues despite the treacherous coup attempt in 2016. In 2017, 2017 foreign investors purchased 8,182 units.

House Sales in Istanbul

Source: CBRT

Marmara Region and Istanbul, in particular, continue to have a vital position for the Turkish economy. Therefore, this region has become an attraction center for many infrastructure investments.

Marmara Region Golden Ring Project[165]

Source: Urban Strategy

- Marmara region has reached more integrated transportation networks in itself and with Turkey in particular with the projects that started after 2002. Transportation projects can also be described as

diversification. Invaluable projects have been implemented to make Turkey a major aviation base around the world with rail transportation, highways, and sea routes. Therefore, this activity has increased the economic and social mobility as well as the demand for the region all over the world.

- In Istanbul, housing prices showed a strong trend between 2010 and 2016. Having started in 2016, the correction movement continues albeit in a decreasing fashion. Market signals that it is reaching the equilibrium price.

- We observe that houses are built in areas with lower land costs outside the city center due to the limitations of Istanbul's geographical structure and population concentration. Infrastructure investments in the city's periphery over the last decade have also increased demand for new houses in these regions. Nevertheless, as seen in many global cities, another attribute is the high level of real estate prices in city centers. We observe the same situation in Istanbul.

- Based on the evaluations of the districts of Istanbul, we see that the biggest houses can be purchased in Arnavutköy with a price of 300,000 TRY. One can buy only a 29 m2 house in Beşiktaş with the same amount of moneyr[166].

The Size of a House that can be Purchased for 300,000 TRY in Istanbul (m²)

Source: CBRT

Unit prices across Istanbul rose by 16% and 8.1% on average in 2016 and 2017, respectively. This development is considered to be influenced by price corrections in many districts which previously experienced rapid price increases[167].

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165   GYODER, "Restructuring of Istanbul-Reconnection, Regeneration, Resettlement", Spring 2015, p.9
166   ibid, p. 10
167   ibid, p. 10

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Price Developments in Selected Districts of Istanbul
(Annual % Change, 12-Month Moving Average)

Source: CBRT

How many Square Meters can be Purchased for $1 Million in World Metropolises? (2017)

How many square meters can be bought in first-hand house purchase with $1 million across the world?

CITY	AREA sqm
MONAKO	16
HONG KONG	22
NEW YORK*	25
LONDON	28
SINGAPORE	39
GENEVA	41
PARIS	46
SIDNEY	48
SHANGHAI	54
LOS ANGELS*	58
PEKIN	66
TOKYO	76
BERLİN	77
MİAMİ	78
MELBOURNE	90
MUMBAI	92
İSTANBUL	98
DUBAİ	138
CAPE TOWN	157
SAO PAULO	173

Human Scale

*Only new developmets. All data as of 2017 4th quarter and based on the exchange rate on December 31, 2017.

Source: Knight Frank Douglas Elliman, Ken Corporation

It would be appropriate to compare Istanbul in terms of price movements with other similar cities as it is is a world metropolis. According to a study by Knight Frank, an international real estate analysis company, Istanbul seems to be quite cheap in the segment of first-class houses that have superior quality. Appreciation of foreign exchanges against the local currency in the process has made the value of real estates in Turkey, and especially Istanbul, cheaper for international customers compared to other options.

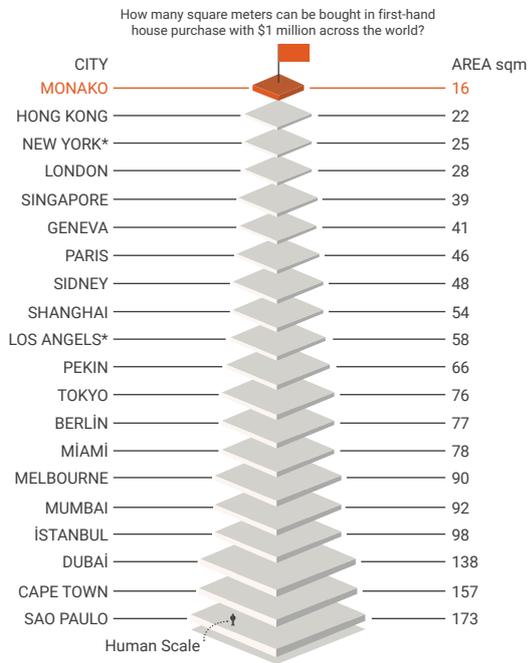As a result, we can make the following remarks for the Istanbul real estate market.

- Following the enactment of the reciprocity law, many foreigners purchased real estates in Istanbul,
- Availability of a diverse range of housing and other real estate products in line with a demand structure changing due to the urbanization phenomenon (constructing houses with different architecture as well as shopping centers, hotels, and hospitals)
- The arrival of foreign investors has further increased the great interest in not only housing but also commercial real estates and related investments in Istanbul. In fact, foreign investors' growing interest for the last five years has been mainly driven by Istanbul's price advantage compared to international markets.
- Urban transformation projects are considered factors that boost both supply and demand.
- Growing student population creates a dynamic economic composition, and subsequently, housing and commercial building need.
- Incentives for foreign investors, such as primarily taxes and duties.
- The effect of the deductions provided for domestic consumers such as title deed charges and VAT,

- Contributions of the infrastructure (megaprojects) to the urban and regional economy and the effect transportation facilities.

Istanbul will continue to be a center of attraction thanks to more than 8,000-year history, serving as the capital of three empires, and as a global city for a very long time now.

Ankara: Ankara has seen a moderate price increase for a very long period. Factors such as recent emigration move from Ankara and its conducive land and area structure for house construction held down the prices. Just like in Istanbul, the houses built in the Ankara's periphery can be sold at lower prices than those in the center. Unit prices across Ankara rose by 9.2% and 8.2% on average in 2016 and 2017, respectively

İzmir: Real estates in Izmir began to see very intense demand in the last few years. Intense migration, implementation of infrastructure investments that will provide ease of transportation for n other major cities, the interest of branded housing producers has led to a vibrant market structure.

Settlements in the urban and surrounding district parts of Izmir attract similar demand as they are easier to reach from the city center compared to other big cities. Unit prices across Izmir rose by 15.3% and 18.6% on average in 2016 and 2017, respectively.

3.3.7. Public Infrastructure Investments

Turkey exerts remarkable efforts to increase public spending and make necessary investments such as transportation and energy. Its past and present invest-

Price Developments in Selected Districts of Ankara
(Annual % Change, 12-Month Moving Average)
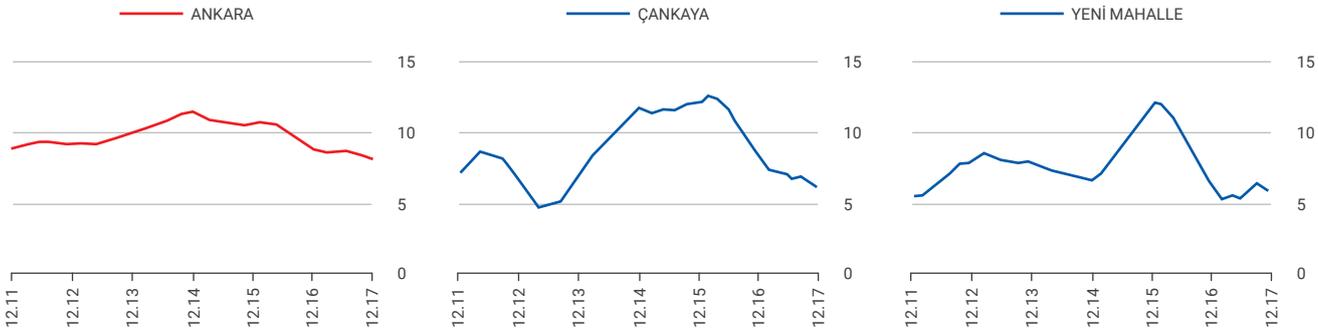
Source: CBRT

Price Developments in Selected Districts of Izmir
(Annual % Change, 12-Month Moving Average)
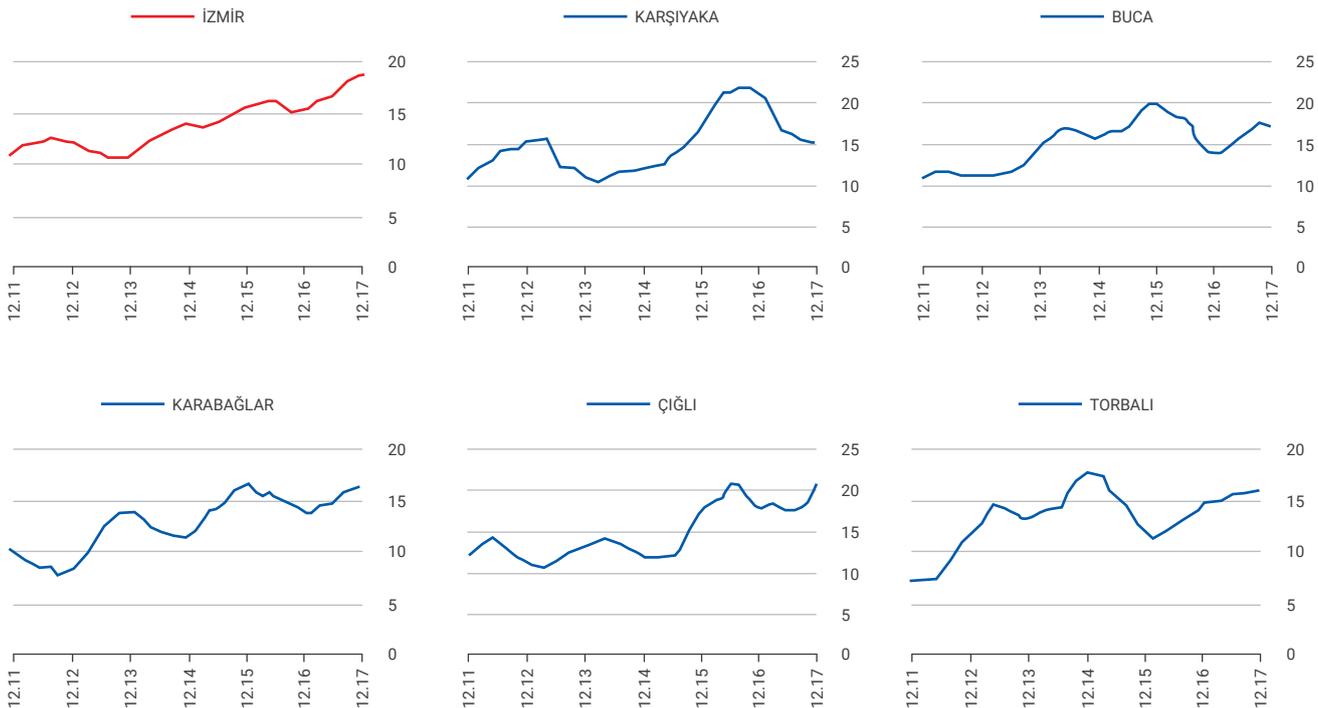
Source: CBRT

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TURKEY CHALLANGES THE WORLD WITH PUBLIC-PRIVATE INVESTMENTS

Last year, Turkey undertook 40 percent of the mega projects around the world with seven projects worth USD 44.7 billion and became the leader in the mega projects ranking.

	Investment size (million,USD)	Project
Turkey	35.587	3RD Airport
Turkey	6.356	Gebze-Orhangazi-İzmir Motorway
Peru	5.373	Lima 2nd Metro Line
Malaysia	2.675	Jimah East Thermal Power Plant
Mexico	1.513	Los Ramones 2nd Stage Natural Gas Pipeline
Russia	1.200	Volgograd Drinking Water and Wastewater Infrasructure
Phillpines	1.195	San Buenaventura Thermal Power Plant
Colombia	1.164	Chirajar-Villavicencio Highway
Turkey	1.086	Dalaman Aiport Domestic Terminal Building
Colombia	1.080	Nelva-Mocoa Santana Highway

The top countries regarding the total amount of public-private investments

	Number of Projects	Investment size (million,USD)	Its share of total global investment (%)
Turkey	7	44,7	40%
Colombia	18	11,8	11%
Peru	11	7,1	6%
Phillpines	13	5,9	5%
Brazil	46	4,5	4%

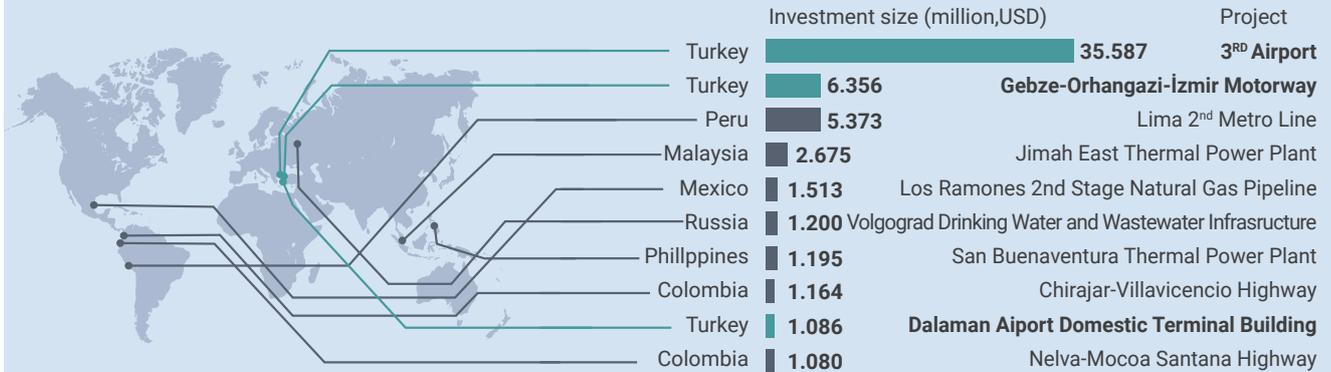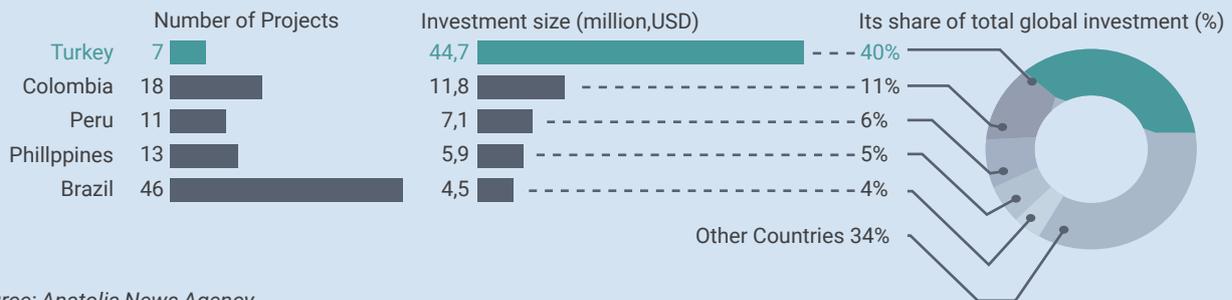Other Countries 34%

Source: Anatolia News Agency

ments place it among the few countries in the world to make such spending. In 2015, Turkey undertook 40% of the global public-private partner investments. It ranks as the global leader in terms of the huge projects.

Turkey's seven total public-private investments are worth $44.7 billion. In addition to reviving the economy and meeting infrastructure requirements, these projects are important for the housing industry. Investments such as metros, highways, special bus routes, and bridges in new settlement regions of Istanbul, Ankara, and Izmir both facilitate access to the center and affect house prices positively.

The major projects in Turkey include Yavuz Sultan Selim Bridge, North Marmara Motorway, Third Airport, Eurasia Tunnel, Canal Istanbul, Istanbul Finance Center (Ataşehir), Baku-Tbilisi-Kars Railroad, and 1915 Çanakkale Bridge, 3-Storey Tube Tunnel, City Hospitals, and Zigana Passage. Yavuz Sultan Selim Bridge, Osmangazi Bridge, and Eurasia Tunnel projects were constructed very quickly and put into service.

1915 Çanakkale Bridge, one of Turkey's important transportation projects, will connect Anatolia and Thrace via Çanakkale. The groundbreaking ceremony took place in March 2017, and the planned operation date is

2023. Its total investment cost amounts to 10.5 billion TRY. The bridge's total length and central span length will be 3,860 meters and 2,023 meters, respectively. With these sizes, it will be the world's longest when completed. The project will also feature a 352-km highway and serve as the fifth suspension bridge in the Marmara Region.

The bridge is expected to contribute significantly to the commercial activities and the related transportation economy, and it will provide faster and safer transportation in the Marmara Region with its highways.

Another investment project, 'city hospitals,' are another noteworthy component for enhancing development and quality of life as well as economic development. The plans involve reaching 41,000-bed capacity in city hospitals built with the public-private partnerships. The government aims to increase the number of quality patient beds from 6% in 2002 to 64% by the end of 2017. Eight hospital inaugurations are targeted this year, and three of them are now operational.

Another aspect of health investments is that they lead to foreign exchange entries through health tourism. Very expensive health services in Europe and the

1915 Çanakkale Bridge

TURKEY TO CREATE A NEW VALUE FOR THE COUNTRY.

- Çanakkale bridge to be constructed to celebrate and crown the 100th anniversary of the Turkish Republic will have the longest span of any bridge in the world, with the 2023 meter mid-span.

- It will be the first suspension bridge of Çanakkale and fifth of the Marmara region.

1915 ÇANAKKALE BRIDGE

Kınalı
Malkara
İSTANBUL
• ÇANAKKALE
• BALIKESİR
• MANİSA
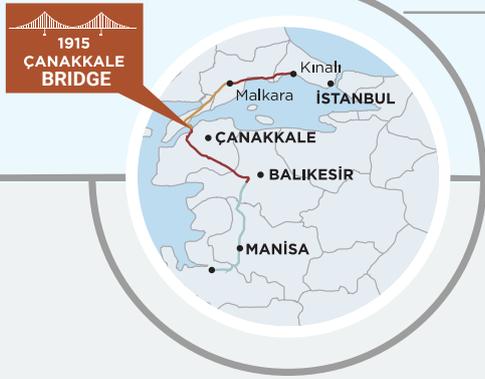
━━ Kınalı-Tekirdağ-Çanakkale-Gelibolu Balıkesir-Savaştepe Highway

The bridge will be located between **Lapseki Şekerkaya** in Anatolia Side and **Gelibolu Sütlüce** in European Side of İstanbul.

━━ **TOTAL LENGTH OF THE HIGHWAY**

━ The bridge and 100 km Malkara-Çanakkale road will start to operate in 2023.

352 KM

Interior Span 2,023m

Total Span 3,860m

₺ Cost of the project
10.5 BILLION TRY

1915 Çanakkale Bridge will be opened in 2023.

1. It is expected to outstrip the Akashi Bridge in Hyogo. (Akashi Kaikyo Bridge - 1991)

WITHIN THE HIGHWAY PROJECT

Along with the 1915 Çanakkale Bridge
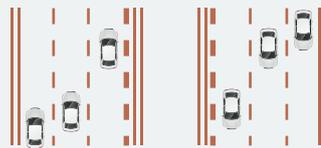
Totally 6 lanes (criss/cross lanes)

31 Viaduct

30 Interchange

143 Underground and overpass

5 Tunnel will be constructed.

Source: Anatolia News Agency

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lack of countries with quality health services make Turkey a center of attraction.

Zigana Tunnel is another striking example of transportation activities. The tunnel will be constructed on the Trabzon-Gümüşhane line connecting the Black Sea and Eastern Anatolia, and make transportation fast and secure. It will be world's second longest and Europe's longest tunnel. Consisting of two 14.5 km-long tunnels, Zigana passage will be put into service on October 29, 2019.

City Hospitals

TURKEY INTRODUCES "CITY" HOSPITAL

As part of the 41,000-bed capacity city hospital project to be built through public-private partnership model theree out of the eight city hospital were put into service this year.

OPERATIONAL
CITY HOSPITALS AND BED CAPACITIES

MERSİN
1.253

ISPARTA
755

YOZGAT
475

ANKARA BiLKENT CITY HOSPITAL

TO BE THE LARGEST IN EUROPE

3.700 Bad capacity

1,3 mn sqm indoor area

BED CAPACITIES OF OTHER CITY HOSPITAL TO BE OPENED THIS YEAR

Ankara Bilkent City Hospital	**3.700**
Kayseri City Hospital	**1.583**
Adana Entegre City Hospital	**1.550**
Eskişehir City Hospital	**1.081**
Manisa City Hospital	**558**

2.483 — 28.208 — 10.000

CITY HOSPITAL PROJECT

TOTAL 41,000 BED CAPACITY

■ Operational ■ Contract signed, construction process ongoing ■ Ongoing tender process and still in feasibility stage
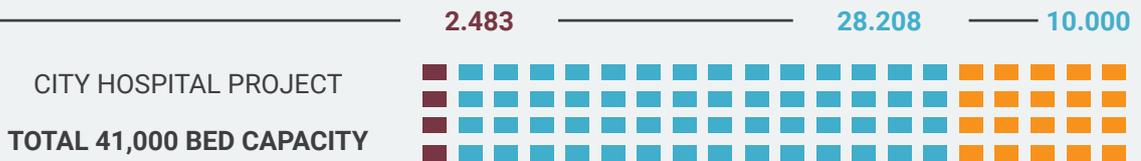
The number of quality patient beds will rise from 6 percent in 2002 to 64 by the end of this year

Source: Anatolia News Agency

Zigana Tunnel

NEW ZIGANA TUNNEL TO BE EUROPE'S LONGEST TUNNEL

Built on the Trabzon-Gümüşhane highway, Zigana Tunnel will be the world's second longest and Europe's longest tunnel.

- Drivers will be able to travel between Gümüşhane and Trabzon in 40 minutes
- The contractor will build two tunnels each with 14.5-km length totaling 29 kilometers
- The tunnel is scheduled to be opened on October 29, 2019

New Zigana Tunnel 14,5 km x2

TRABZON, GÜMÜŞHANE HIGHWAY

Başar

Hamsiköy

Köstere

Budak

TRABZON

GÜMÜŞHANE

Zigana

K

The tunnel is constructed between Köstere village of Gümüşhane's Torul district and Başarköy of Trabzon's Maçka district.

Source: Anatolia News Agency

Another quite significant project is the High-Speed Railroad planned between Ankara and Istanbul. Feasibility study for the High-Sped Railroad line has been substantially completed. The line will be completed with the Build-Operate-Transfer model with a total expected length of 500 kilometers.

The total cost of the project is estimated to reach $5 billion. The new line will be built parallel to the Ankara-Istanbul Motorway reaching Istanbul Köseköy and then connecting to the Yavuz Sultan Selim Bridge[168].

High-Speed Railroad Istanbul - Ankara

Black Sea

ISTANBUL

Sea of Marmara

Kocaeli

Adapazarı

Düzce

Bolu

Gerede

Bilecik

Eskişehir

Polatlı

ANKARA

— İstanbul-Ankara Motorway
— Existing High-Speed Train Line
--- Planned High-Speed Train Line

The project's approximate cost is estimated to be 4.2 billion TRY. This line will connect Central Anatolia with the Aegean region, and it is expected to contribute to the integration of the national rail network.

The project will materialize after due consideration of infrastructure investments, population, economic growth rate, industry structure, ease of transportation and similar variables. At this stage, Marmara region, in particular, seems to have a priority in the investments in the light of the above variables.

Sizes of Certain Projects in Istanbul

Project Name	Budget	Project Model	Current Status
3rd Bridge (Including the Northern Marmara Motorway)	4.5 billion TL	Build Operate Transfer	The Bridge was Put into Service
3rd Airport	Cost: €10.3 billion, Tender Price: €22.2 billion	Build Operate Transfer	Construction underway
Istanbul Finance Center (IFC)-Ataşehir	4.5 billion TL		Construction underway
Eurasia Tunnel	$1.3 billion	Build Operate Transfer	Put into Service
Canal Istanbul	$5.5 billion		Route Construction is Underway
3-Storey Grand Istanbul Tunnel	$3.5 billion	Build Operate Transfer	Proposal is Evaluated

Source: www.megaprojeleristanbul.com

Completed and ongoing infrastructure projects rejuvenate not only the city and region where they are located but also the national economy. As for the region and city, we see that they have ramifications such as attracting real estate investments and positively affect price movements.

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168   http://emlakansiklopedisi.com/wiki/surat-demiryolu-hatti-2018de-hizmete-girecek, July 2016, p.1

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The construction industry and other related sub-industries are the most crucial aspects of the economy. The Turkish housing industry has achieved fast growth in the past fifteen years. The macroeconomic importance of the construction industry arises from its multiplier effect. It sets 250 sub-industries in motion with impacts on both growth and employment.

The multiplier effect of the construction industry has a considerable impact on domestic economies and even on the world economy, as was evident in the global crises of 2008.

The construction industry is highly affected by macro- and microeconomic conditions, and it is among the industries most influenced by changing conditions. Thus, we need to look into domestic and global macroeconomic developments so as to understand the sensitivities and trends. In addition to economic developments, the industry may also be influenced by other variables that are more difficult to quantify, including expectations about the future, risk perception, and preferences.

As of 2017, the most remarkable developments in the industry can be summarized as follows[169];

- The construction industry stands out with the rapid growth it has registered in recent years. In 2017, the construction industry rose by 8.9% in terms of the chain volume index. The industry's growth rate is above Turkey's growth rate of 7.4%. This course was influenced by especially the public sector's support for the industry, year-long sales campaigns of real estate developers, and the low base effect.

- Various incentives were provided to the industry from the last quarter of 2016. The reduction of the down payment rate from 25% to 20% on mortgage loans from September 2016 encouraged house sales with mortgage throughout 2017. A law enacted in January 2017 entitled citizenship to foreigners buying a house in Turkey provided that they met certain conditions. In addition, VAT exemption was introduced for residential sales to foreigners and to Turkish citizens living abroad.

- With the arrangement in February 2017, the applicable VAT rate in the delivery of houses whose square meter tax value changes from 1,000 TRY to 2,000 TRY was reduced to 8% in houses over 150 m², in residential building projects whose licenses were obtained after January 1, 2017, and

in housing construction projects publicly tendered after this date. Initially applicable until the end of March, the arrangement was extended until the end of September 2017. Also, the stamp tax on residential sales was canceled and the title deed, 4% for real estate sales, was temporarily reduced to 3% for residential and business premises.

- In the last quarter, industrial activity saw a slight decline in parallel with the end of public sector support in late September and the decline in domestic investment and consumption appetite. After the acceleration in the third quarter, house sales slowed down year-on-year in the last quarter. This development was driven by an annual 25% contraction, especially in mortgage sales, in line with higher financing costs. However, an overall assessment of the year would show that the construction industry grew faster than GDP in 2017

- There is an expectation that there will be a focus on the housing projects for the middle-income group and regional analysis will be taken into consideration in the new projects to resolve surplus production issue in the coming period.

- Having a significant share in the rapid growth registered by the construction industry in recent years, infrastructure projects are also underway. Some of Istanbul's mega projects standing out with their huge investment scales include the third airport, Canal Istanbul and Istanbul Finance Center. Implemented mostly by the Build-Operate-Transfer (BOT) model as preferred by the public sector, these projects will continue to reflect positively on the industry's activities.

- Urban transformation program comes to the forefront as the driving force of the industry. Developments in this area and the implementation speed of the projects will affect the industry's performance considerably.

- The total amount of the projects undertaken by Turkish contractors in 2017 under overseas contracting services rose by $1.6 billion year-on-year to around $14.7 billion. Improving relations with Russia increased business volume in the sector. Moreover, the recovery in energy prices positively influenced the construction activity in energy export markets and thus the business volume of Turkish contractors. On the other hand, traditional markets did not make a complete recovery, and ongoing geopolitical risks continued to limit industry activity and growth opportunities. On the other hand, sub-Saharan Africa continues to form a focal point in the quest for alternative markets.

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169   Isbank, "2018 Expectations With Regards To Sectors ", Economic Research Department, March 2018, pp.29-30

- The Turkish economy can be expected to grow by around 5% in 2018 with the construction and real estate industry having a course parallel to domestic economic activity. However, pressure on prices may adversely influence the profit margins and investment appetite of the companies due to the postponed (weakened) demand conditions along with increased costs. Moreover, the high level of inflation, interest rates, exchange rates and political and geopolitical risks are thought to limit investment and consumer appetite in the coming period.

- On the other hand, public spending, expected to continue in 2018, may mitigate the pressure on domestic consumption. In this context, it was announced that there were efforts to increase the government's contribution to the Housing Account System, to provide low-interest housing loans to the system users, and make deductions to the withholding tax on the savings and title deed fee in house purchases. Urban transformation is expected to have a buoyant course in 2018 in accordance with the changes to the Zoning Law in October 2017, which enables the project bottlenecks to be partially overcome.

- The annual rate of increase in house prices across Turkey has been declining in real terms since early 2016. The slowdown in 2017 was slightly higher. On the other hand, we observe that house prices continue to increase due to the strong demand in cities such as Yalova, Bursa, Trabzon, and Antalya where foreigners make purchases intensively.

- There is an expectation that there will be a focus on the housing projects for the middle-income group and regional analysis will be taken into consideration in the new projects to resolve segment-related surplus production issue in the coming period.

It is clear that the construction industry and variables of its components must be analyzed meticulously at certain intervals. Variables that are assumed to have less effect occasionally cause more considerable effect, while it is vice versa in other times. For example, a rise in housing loan interests reduces consumer demand in addition to increasing production costs. However, consumption sensitivity towards interest becomes lower in certain periods.

The concept of housing prices is another critical issue discussed in socioeconomic terms. The housing industry outlook accurate pricing constitute a critical indicator, not only for the industry but also for the entire economy. This is of vital importance for central banks and economic policymakers.

Even though some economic and finance methods exist for the analysis and formation of asset prices, it is still impossible to establish correct prices for all times and places. This is mainly due to the rise of oc-casional predominant factors related to humans and other relevant behavioral patterns. They are hard to measure. Furthermore, a homogeneous comparison becomes impossible since especially the housing projects vary from each other greatly in terms of location, size and social means.

We found that there is no bubble in the Turkish housing market based on the question "Whether there is a price balloon in the Turkish housing market" as frequently discussed in the public opinion. Analyses based on the latest data show that the nominal price increase follows on a reasonable trend.

In the light of our analysis from the previous reports and the current one, we have determined that there is no "price balloon" in the Turkish Housing Market. Corrections in the regions with likely bubble formation mitigated excessive prices. Housing prices across Turkey (HPI) increased in real terms by 45.49% on average between January 2013 and January 2018. The new housing price index achieved a 38.57% real price increase in the same period. These data show that the market is far from an 'asset bubble.' Both indices have seen an acceptable growth rate. However, it will be appropriate to follow both costs and real price increases carefully.

We see that the housing market strives to seize a dynamism and equilibrium prices as much as possible considering the house prices across Turkey.

However, we can see regional and/or district-based bubbling trends. For the analysis of such price movements, it should also be noted that relevant regions may have their own price dynamics. Our analysis below summarizes the developments in the Turkish real estate market.

- In this period, the real price increase was 69.48% in Istanbul, Turkey's most important housing, and real estate market. Istanbul was followed by Aydın-Denizli-Muğla region and then by Izmir with 64.27% and 59.23% increases, respectively.

- Izmir indicated the second-best performance among the three major cities. Real prices rose by leaps and bounds reaching 59.23% between January 2013 and January 2018.

- On the other hand, Ankara, the capital city, posted the most moderate price movement among the three major real estate markets due to a gradual increase. Real prices rose by 14.25% between January 2013 and January 2018.

- We see effects of the summer resorts and coastal towns in price changes calling this 'summer house and immigration effect.' The most typical examples are Antalya, Denizli, Aydın, and Muğla.

- The ongoing 'Gulf effect' and periodic motives seem to have increased the prices in the Black

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Sea region. The real price increase in Artvin-Gire-sun-Ordu-Rize-Trabzon region stood at 38.36% between January 2013 and January 2018. Here, the share of foreign purchases in Trabzon has proven effective.

- It should be noted that there may be price changes in different districts, neighborhoods, and streets of the same cities as all the evaluated data point to an increase in the average price.

- As indicated in the definition of the bubble by R. Shiller, a real price increase exceeding 100% in the last five years may be described as an 'asset bubble.' However, in both Istanbul and other regions, higher small-scale price increases may also occur at neighborhood or street level due to the location of the property, various characteristics and consumer behaviors.

We observe significant changes regarding trends if we analyze seasonal price changes[170];

- The overall price increases in Turkey materialized as 1.46% for the period January 2013-January 2018 as opposed to the period June 2012- June 2017. On the other hand, the new house prices rose by 2.43%. The rate of increase declined both in the Turkish Housing Price Index and the New Housing Price Index. On the other hand, we observe that cost increases lie behind slightly higher price increase of the New Housing Price increase.

- Although Istanbul continues to rank first in terms of nominal price increase, it indicated a negative real price increase recording an 8.51% loss in January 2013-January 2018 period compared to June 2012-June 2017 period. This price movement can be seen as a price correction as we emphasized in the previous report. Such occasional price fluctuations in asset prices can be regarded as balancing in terms of market dynamics.

- Among the three big cities, Izmir's housing market achieved the fastest real price increase in January 2013-January 2018 period. Real housing price increases in Izmir materialized as 9.39% for the period January 2013-January 2018 compared to the period June 2012- June 2017. The branded housing projects in Izmir and the immigration from other major cities affected the prices.

- Ankara suffered a 0.45% loss in real terms with a price change below Turkey's average between the two relevant periods. However, one should not overlook that there is a slowdown in the real price elasticity in Ankara. The prices reflect the increase in housing supply in Ankara and the impact of immigration to other cities.

- We see an interesting price correction in Gaziantep, Kilis, and Adıyaman regions. Posting the highest price increase until 48 months ago, this region saw a slowdown in the price increase in the last five years with a real decline of -9.78% between the last two periods. In the two-year period, the price decline in this region stood at nearly 30%. Gaziantep, Kilis and Adiyaman region saw the fastest real price decline. Other than the market's rational effort to balance supply and demand, this situation can be interpreted as the impacts of lower demand due to less migration.

- Van-Bitlis-Hakkari region saw 4.48% real price increase for the January 2013-January 2018 as opposed to the period January 2012-January 2017. The region seems to have compensated for the negative price increase in the previous periods with an almost 10% real price increase over the last year. However, real price increases in this region are still well below the national average.

- Artvin-Giresun-Ordu-Rize-Trabzon region saw a 16.28% increase in the period January 2013-January 2018 compared to June 2012- June 2017. The fastest real price increase was seen in Artvin, Giresun, Ordu, Rize and Trabzon region. We can think that the demands of foreigners and the recovery led by TOKİ's construction activities in the region affected this trend.

- Becoming one of the regions with the fastest uptrends in price increase rates in the previous report period, Aydın, Denizli and Muğla region saw a 2.33% real price decline between January 2013 and January 2018. The recovery in the tourism industry in the previous period, the impact of the summer season and domestic investors' demands seem to be influential in these regions. However, we see that rapidly increasing prices have made a slight correction with seasonal effects. On the other hand, ease of travel from Istanbul to the relevant cities thanks to the transportation investments in especially the Aegean region has a potential to create a demand recovery after a certain while.

- The real price increases in Konya, Karaman region, materialized as 1.4% for January 2013-January 2018 compared to June 2012-June 2017. This region can also be said to have experienced a correction movement in its own dynamics.

- Antalya-Burdur-Isparta region had poor price outlook in the past one year. There was a 0.45% increase in real terms between June 2013 and June 2018 compared to the January 2012-January 2017 period.

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170   You can find the related table in Section 3.3.1.

We see that the housing market strives to seize a dynamism and equilibrium prices as much as possible considering the house prices across Turkey. In this sense;

- The Turkish Housing Market's sub-markets demonstrate dynamic and rational trends. In particular, price movements demonstrate adjustment and increases when necessary. One of the sub-markets with adjustments is the Gaziantep, Kilis, and Adıyaman region while the Aydın, Denizli, Muğla and Izmir region is the most typical example of increase.

- The fact that contractors increases and decreases construction licenses according to market expectations dynamically.

- Giving increasingly rational decisions, the consumers do not only heed the price criterion anymore but rather evaluate many factors such as building quality, materials, and ease of transportation.

- We see that the effects of the July 15 were dealt with quickly. At this stage, the campaigns of the branded house manufacturers (such as Emlak Konut REIC and GYODER members) made important contributions to creating positive expectations and boosting morale in the industry. The launch of similar campaigns in different scales from time to time accelerates not only the branded housing producers but also the entire industry.

- The favorable periodic loans provided by the banking industry to the final consumers and the financing models jointly formed by corporate firms and banks benefit the industry considerably.

- Foreign investors not only look at the quality and quantity of housing but also consider the city as a "life center," which is a remarkable aspect. The most typical example is the house sales to the foreigners in Istanbul.

As is the case with all asset prices, the initial impact on prices comes from changes in supply and demand. For housing prices, the change and structure of demand may have a direct impact on supply, and a change in supply may be slower than demand in the construction industry. Players in the housing sector have been able to adapt to the conditions by showing flexibility in the face of many domestic and external shocks since 2001. The construction and housing market is gradually becoming more effective as construction companies become more corporate and perform better financial management, and as buyers act more reasonably in their demands.

When examining the concept of real estate, it is beneficial to look at not only the prices on the market but also the underlying costs assumed for manufacturing.

Based on the cost elements we described in detail in the previous chapters: the building construction cost index (BCCI) rose in the fourth quarter of 2017 by 6.5%, 22.8%, and 19.7% on a quarterly basis, year-on-year basis, and based on the averages of four quarters, respectively. In the fourth quarter of 2017, the labor index and material cost index rose by 1.8% and 7.9% on a quarterly basis in BIME (Building Construction Cost Index). The labor and material indices rose by 13.7% and 25.6%, respectively, compared to the same quarter of the previous year[171].

- The nominal house prices in Turkey increased by 23.48% between January 2017 and January 2018. However, the real increase appears as 3.15% if we deduct the Building Construction Cost Index. The real yield based on the D-PPI (Cost Inflation) is 10.11%..

- The nominal increase rate for the new houses stood at 22,72% in the new period. The BCCI-reduced real price appeared as only 2.52% and the real return based on the D-PPI was 9,43%..

- For Istanbul, the nominal yield for the last year came in at 16.52% based on the index. The BCCI-reduced real price stood at -2.65% and the real yield based on D-PPI was 3,9%. In Istanbul, rapidly increasing costs disrupt contractors' cash flows in real terms along with housing prices with a slower rate of increase.

- We should note that the figures are based on an average, and they do not fully reflect cost elements such as unexpected financial costs (interest burden-funding cost) and exchange rate burden. As a result, profit margins of the industry materialize at levels lower than thought.

- Cost increases are reflected in sales prices to a remarkably limited extent. Contractors seem to have undertaken costs themselves to a significant extent.

Hedonic House Price Index is calculated through the hedonic regression analysis to separate it from the quality impact of the housing price index that is calculated by the CBRT. According to results, approximately one-fourth of the nominal increase in the house prices across Turkey and approximately half of the real increase can be said to result from quality increases[172].

A crucial point to be considered in the above price dynamics is that market mechanism gradually balances the prices, which recovered in locations with low increase rate and slowdown in locations with heavy increase rate. This, in turn, is a leading indicator of a housing market that acts increasingly rational.

171   TurkStat,' Building Construction Cost Index, 4th Quarter: October-December, 2017", Issue: 30566, January 19, 2018
172   Hülagü Timur, Kızılkaya Erdi, Özbekler Ali, Tuna Pınar, "Economy Notes - Adjustment of the Turkey Housing Price Index from Quality Change Effect" CBRT, Issue: 2016-02, February 1, 2016, p.10

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Housing demand and supply is becoming gradually settled in Turkey. An average of 1.2 million houses change hands annually, and there is also a need for 650,000 new houses each year. TurkStat data put the number of households in Turkey at around 19,481,000. The average household size is 3.8 people. The rate of home ownership was 67.3% in 2015 whereas it was 60.9% in 2006.

Rural to urban migration continues in Turkey. Turkey's current urbanization rate is 78%, and the corresponding population is 60 million. Rural-to-urban migration is expected to continue until 2023 with the urbanization rate exceeding 84%. Accordingly, the urbanized population is estimated to reach 71 million by 2023. Due to migration-related urbanization, housing demand is projected to continue until 2025. Urbanization causes profound differences in the population's characteristics.

The Turkish construction and housing sector will remain one of the engine industries in Turkey. Considering demographic and economic developments, the industry boasts even more potential compared to the rest of the world. However, occasional fluctuations in prices must not be labeled as either collapses or bubbles. Regardless of the asset type, prices do not constantly increase or decrease. Therefore, the industry will be headed for growth in the medium term as long as we preserve national and industry-wide stability and dynamic structure.

The situation in the housing market takes place in a cycle reminding the Cobweb[173] theory. Supply adjusts itself according to the demand with delay by increasing or narrowing the production exceedingly in an effort to establish a balance. In theory, it is possible to see situations called stable, unstable and neutral balance. The increase in individuals' incomes or the expectation that the real estate prices will increase in the future as well as supply side activities such as interest rates and campaigns can also stimulate demand.

The real estate price and supply movements in our country seem to have resulted from the above three factors in recent years. However, the importance and weight of these elements vary according to the relevant economic conditions. The period from end-2017 to the present day reminds us of a search for some kind of 'balance.' For a sustainable and stable demand, the scale needs to grow in a macroeconomic dimension together with an income increase. On the other hand, access to funds and ease of cost will also support this process in the short term.

An examination of the first half of 2018 shows that demand has maintained its relative vitality. We also see supply and demand flexibilities for the achievement of the above-mentioned 'market balances.'

The housing sale figures as one of the important indicators of the housing industry demonstrate the results of the aforementioned natural demand. The number of sold residential units was 997,550 in 2011, 971,757 in 2012, 1,157,190 in 2013, 1,165,381 in 2014 and it broke a new record by reaching 1,289,320 in 2015. On the other hand, Turkey's housing sales reached a new record, 1,341,453 in 2016 despite the systemic risks faced by Turkey and global issues[174]. The 2017 period saw the sale of 1,490,314 houses.

But it is also true that the economy and essentially the real estate industry need both legal and institutional arrangements to grow in a 'sustainable' manner. For this purpose;

- Making a permanent tax arrangement and offering advantages to especially those buying their first house,

- Providing special exemptions to the industry with the Corporate and Income Tax, the arrangements of which are in progress.

- The possibility of higher sales to foreigners with certain changes to the regulations related to the sale of real estate to foreigners,

- Making lean arrangements regarding value increase and property tax in line with the current circumstances,

- Making zoning arrangements, which are still in progress, according to factors such as population density, infrastructure status, earthquake and other natural disasters as well as urbanization plans,

- Making one-off arrangements to close the difference between 'official construction value' and 'actual property value' as it leads to problems in the financial markets, tax and purchases/sales,

- Using the source to be obtained in this way in the urban transformation through İller Bankası or as a source for Emlak Bank which will be activated again,

- As in some countries, the efforts for the establishment of a predominantly public bank that provides long-term housing loans to both individuals and institutions and carries out a real estate-based "securitization" will have a substantially positive impact on the financial industry.

- The updating or restructuring of legal regulations in order to issue real estate-based securities through the banks (both deposit banks and participation banks) and capital markets,

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173 Cobweb Theorem: It is based on the assumption that price changes cause an immediate reaction to supply and demand quantities.
174 TurkStat Annual Housing Sales Figures

- Establishing markets within Istanbul Stock Exchange related to real estate-based rights and real estate securitization

- Maintaining tax exemptions for Real Estate Investment Funds and Real Estate Investment Trusts

- Establishing Infrastructure Real Estate Investment Trusts and offering relevant incentives to municipalities,

- The basic input in the construction of housing for medium and low-income groups and urban transformation purposes (tax reduction in concrete, iron, etc.)

- Characterization of housing sales to exports as exports

- AIR RIGHT (The Transfer of Development Right and related legal infrastructure activities)

- Establishing private cooperatives to meet the housing needs of the low and middle-income groups.

The Turkish economy and the real estate industry adapt to the evolving conditions very dynamically with years of experience. It is evident that the industry will undertake more successful and value-added works if the industry eliminates both production-related and financial insufficiencies.

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