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## Araştırma Makalesi • Research Article

### A Study on Perception of Financial Market Professionals in Turkey Towards Gold<sup>1</sup>

*Türkiye’de Finans Piyasası Profesyonellerinin Altına Yönelik Algısı Üzerine Bir Çalışma*

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#### ÖZ

Türkiye’de geleneksel bir yatırım aracı olarak kabul gören altın son yıllarda önemli bir merkez bankası rezervi haline de gelmiş, finans sektörünün artan ilgisiyle altın tasarruf hesapları, altın yatırım fonları yaygınlaşmaya başlamıştır. Hem Türkiye’de hem de uluslararası piyasalarda altına yönelik yatırım iştahında artış görülmekte, finans sektöründe altının bir finansal enstrüman olarak önemi daha da artmaktadır. Bu çerçevede, bu çalışmanın amacı; Türk finans piyasasında çalışan profesyonellerin bir merkez bankası rezervi, ödeme ve yatırım aracı olarak altın algısını analiz etmektir. Analiz, Türk finans sektöründe yer alan; banka, aracı kurum ve portföy yönetim şirketi çalışanlarından, özellikle hazine/fon/portföy yöneticileri ve çalışanları arasında anket yöntemiyle yapılmış, elde edilen istatistiksel verilerden algı skoru hesaplanmıştır

#### ABSTRACT

Gold becomes an important central bank reserve in Turkey, gold savings accounts and gold investment funds begun to increase with the increasing interest of the financial sector in last years. The risk appetite for gold is increasing both in Turkish and international financial markets. The importance of gold as a financial instrument is growing. Within this framework, the aim of this study is to analyze the perception of gold among the professionals in the Turkish financial market as a central bank reserve, a mean of payment and an investment instrument. The analysis was done by a survey made among the employees of the banks, broker firms and portfolio management companies in the Turkish financial sector, mainly among treasury departments, fund and portfolio managers. A perception score was calculated from the statistical data.

<sup>1</sup> Çalışma, Yakup Alper Yakupoğlu’nun “Bir Finansal Varlık, Yatırım ve Ödeme Aracı Olarak Altın ve Türk Finans Piyasasında Altına Yönelik Algı Analizi” adlı doktora tezinden türetilmiştir.

## Introduction

Never in human history has there been anything more desirable than gold. It has been used as jewelry, a medium of exchange and an investment tool by the people. Even though gold is the oldest medium of exchange in human civilization, it lost its legal tender status approximately a half century ago. However, it is still an investment and saving instrument for households, corporates and governments. Today, in global financial markets, gold is the third largest financial instrument traded after US dollar and euro. Also gold is one of the main reserve assets for the monetary authorities.

Even high amounts of central banks' gold reserves or high trade volumes in global financial markets confirm that gold is an important financial asset and investment instrument. For the Central Bank of the Republic of Turkey, like many other central banks around the world, gold is a crucial asset. In recent years increase in gold reserves of Central Bank of the Republic of Turkey has been remarkable. Gold has also a unique place in Turkish individual investors' portfolios. Therefore, commercial banks in Turkey have been actively marketing gold savings account in recent period. As a result, gold is very popular investment asset in the Turkish market. In this framework, this study aims to find answers for three main research questions in the Turkish financial sector:

1. Is gold a safe heaven and a crucial financial asset for financial market professionals?
2. Related to the first question, if gold is considered a safe haven and a hedge against inflation, is it possible to use gold assets against dollarization in an emerging market?
3. Are gold reserves important for Turkish Central Bank's credibility ?

This research paper is divided in four sections. The first section surveys related studies from the literature in order to support the research questions. Then, in the second section the data and methodology employed to achieve research goals are explained and finally the last section gives a brief summary and critique of the findings.

## Related Studies

As it is highlighted in the previous sections, gold is one of the mostly preferred financial assets in the markets. It is possible to claim that besides many other possible reasons, the perception of gold among investors is an important factor for the high gold demand in the financial markets. However, there is limited research on the perception of gold among investors, even at the international level. Although there are papers on gold in both economic literature and finance literature, researches on general view of professionals and households on gold are very restricted. Because of this scarcity of researches, the literature review in this study is organized in order to establish a base for our questions mentioned above. But first we should mention the studies on the return to a new gold standard after Bretton Woods. These studies were mainly published in US and focused on returning back to a new gold standard in US. This was because of the high inflation created by oil crisis in 1970s (Schwartz 1987: p.364). Some of these studies are; (i) Salant and Henderson's partial equilibrium model of the gold market (Salant and Henderson, 1978), (ii) Arthur B. Laffer's approach to return to the monetary gold standard (Laffer, 1979); (iii) Robert J. Barro's study on modelling price and monetary dynamics in the gold standard (Barro, 1979) and (iv) Paul Krugman's study on currency crises and the model of the government monetary and gold policy framework (Krugman, 1979). Murray N. Rothbard and Richard H. Timberlake should also be mentioned.

One of the remarkable proposal for a new gold standard policy in US at that time was the gold price rule of Arthur B. Laffer. It was a monetary policy rule first proposed by supply-

side economists such as Arthur B. Laffer, Robert Mundell, and Jude Wanniski in the early 1980s. After a three-month transition period, Laffer proposed that the US Federal Reserve announces an official gold price at the average gold price in the London gold market, and from that date on, the US Federal Reserve converted all its reserves to gold at an official gold price in US dollar. After a period of time, the Federal Reserve began to hold an average gold reserve of 40% of its liabilities. Laffer called this amount of Federal Reserve gold reserves “Target Reserve Amount” (Laffer 1980; Salerno 1982). Murray Rothbard mentioned that although gold is not used as currency, many governments and central banks have a high amount of gold reserves, and in the future these gold reserves may cause another gold standard for the reserve currencies like US dollar and British pound (Rothbard 1985: p.7). In the footsteps of Austrian school economists, such as Carl Menger and Ludwig von Mises, Rothbard defended convertibility of the US dollar to gold with a certain ratio, while at the same time he supported closing the Federal Reserve and establishing a free banking system in US (Rothbard 1985: p.12). Another gold standard argument made by Richard Timberlake. Richard Timberlake, a professor at the Cato Institute, wrote that all of the gold reserves of the US Federal Reserve should be sold to the private sector, and management of this gold reserve should be executed by the partner banks of the Federal Reserve System. In his argument, regional Federal Reserve banks operate only as a clearing house in their regions and private banks issue banknotes in exchange for gold reserves (Timberlake 1981; Salerno 1982).

In the 1990s central banks reduced inflation to lower levels and this caused discussions on a new gold standard out of the agenda (Bordo et al. 2003). Beginning with 1990s studies on gold focused mainly as a hedge and a portfolio diversification. Gold is a volatile asset if considered as a financial asset. Jaffe (1989) recommended holding approximately 10% of a portfolio in gold. Gold as a hedge instrument against currency portfolios has also been examined in the literature. Capie et al. (2005) searched whether gold can act as a hedge against currency risk, specifically as a hedge against Japanese yen/US dollar and British pound/US dollar exchange rates. They showed that its ability to act as a hedge is time varying based on unpredictable political and economic events.

It is also argued that the US dollar is the primary currency affecting gold prices in international markets. The basis for this argument is that gold is traded primarily in US dollar especially in London gold market. A weaker US dollar makes gold cheaper. Tully and Lucey (2007) found that the trade-weighted value of the US dollar is by far the most significant factor in explaining gold price changes using an APGARARCH model. Sjaastad (2008) found when looking at longer and more recent data from 1991-2004 that the US dollar is dominant followed by the Japanese yen. The currencies of gold mining countries appeared to have no significant impact on the gold price, which fits well with the fact that gold stocks from investments are vastly larger than the annual flows from mining. O’Connor and Lucey (2015) showed that the trade weighted value of six currencies have negative relationships with the price of gold in that currency. When a currency, such as the US dollar, is losing value on average against all major currencies, it is also losing value against gold. Viewing gold as a currency like asset, it gains value against the dollar all other currencies are gaining.

Another research topic on gold is its reserve asset role in central banking. Gold reserves are used by central banks to build confidence in modern fiat currency system. This confidence would be jeopardized if the price of gold increased too much. This was the theoretical basis for control and management of the price by the central banks, especially the gold agreements of the central banks in 1990s (Baur, 2016). But after global financial crisis in 2008, gold became more attractive for government agencies especially for central bankers. Gold retains its unique status in central bank reserves reported at historical valuation. A central bank’s gold reserve is

a sign of the economic might of that country. The intensity of holding gold is correlated with being a global power in the history, especially by countries that are the suppliers of reserve currencies (Aizenman and Ineoe, 2012). One should also note that this global power effect is also important to understand the sharp increase in the gold positions of the countries challenging the global US dollar supremacy like China, Russia and India (Aizenman and Ineoe, 2012).

There are also studies researching the relationship between gold prices and other financial assets, such as equities and bonds, and also the hedging transactions against US dollar. The concept of “safe heaven” is the main axis of these studies. One of the studies on the safe heaven role of gold is the Baur and McDermott (2010) paper. They tested the hypothesis that gold represents a safe haven against stocks of major emerging and developing countries. Their econometric analysis with a sample spanning a 30 year period from 1979 to 2009 shows that gold is both a hedge and a safe haven for major European stock markets and the US but not for Australia, Canada, Japan and large emerging markets such as the BRIC countries (Baur and McDermott, 2010).

There are also empirical studies in Turkey. Kutun and Aksoy (2004) examined the response of the gold market to other public information arrival critical to Turkish economy, such as GNP, balance of trade and tourism. The gold market reacts to public information arrival about GNP and balance of trade, suggesting that real sector news has important effects on the market (Kutan and Aksoy (2004). Ozturk and Acikalin investigated whether gold is an internal hedge and/or an external hedge against Turkish lira by using monthly data from January 1995 to November 2006. They found that gold acts as an effective hedge against potential future TL depreciation and rising domestic inflation. Furthermore, gold price may be considered as a good indicator of inflation (Ozturk and Acikalin, 2008). Omag’s paper (2012) observed the relationship between gold prices and selected financial indicators in Turkey from January 2002 to December 2011 with a regression model. The results of this study demonstrated that there is a positive relationship between national gold prices, Istanbul Stock Exchange 100 Index and the exchange rate between Turkish lira and the US dollar (Omag, 2012). Aksoy and Topcu’s paper examined the relationship between gold prices and stock prices. According to regression analysis test results, by using monthly data from January 2003 to December 2011, there was significant negative relation between gold prices and stock prices in Turkey (Aksoy and Topcu, 2013). Gurgun and Unalmis’s study aimed to analyze the hedge and safe haven properties of gold against equity market investment for a large group of emerging and developing countries from the perspective of both domestic and foreign investors. Their results showed that gold performs as a hedging tool and a safe haven in most of the financial markets for domestic investors. They found that gold is a safe haven for foreign investors only in a few markets. During the time of extreme losses in equity markets, gold acts as a safe haven in more countries for both domestic and foreign investors (Gurgun and Unalmis, 2014). Uludag and Lkhamazhapov examined the long-memory properties and structural breaks in spot and futures gold returns and volatility in Turkey. Their data covered the period from 2008 through 2013 in which gold prices hit an all-time high. ARFIMA–FIGARCH model provided evidence of dual long memory in spot series and a lack of long-memory property in futures returns. Their findings further provided evidence of one structural break, which is associated with correction in the gold prices during the post-global financial crisis (Uludag and Lkhamazhapov, 2014). Gencer and Musoglu examined the volatility transmission mechanisms bivariate, between gold prices and alternatively, Turkish stock market and government bond indices. They investigated the period between June 2006 and November 2013, which in fact, was a highly volatile period in the world economy, marked by the 2008 crisis. Their results confirm a bi-directional shock and volatility transmission between gold prices and Turkish stock market,

whereas they document a uni-directional transmission from gold asset to Turkish government bonds. Their findings depicted gold as a unique asset to reduce the portfolio risk, especially in times of adverse market conditions in Turkey. (Gencer and Musoglu, 2014). Another study is Caliskan and Nadjan paper. Their study predicted the price of gold to increase or decrease subsequent to significant positive or negative stock returns. They provided some evidence to support this hypothesis, against the traditional view, arguing that investors may demand more or less gold to take advantage of market fluctuations (Caliskan and Nadjand, 2016).

Recent studies on gold are mostly empirical and use gold prices and trading volumes in their analyses. But studies on individual and institutional investors' attitude towards gold and their perception are, as mentioned above, very limited even in the international level. Because of the scarcity of researches on this topic, two surveys in two different countries are mentioned in this study. The first study was done by Tagtekin. In this study, individual investors' gold perception was analyzed. Tagtekin's survey was conducted by using random sampling model among the individuals living in Istanbul. In this research, 241 individuals attended the survey (Tagtekin 2016). Tagtekin's study reveals that individual Turkish investor prefers mostly foreign exchange (US dollar and euro) as their main investment instrument. Gold holds the second ranking after the foreign exchange and real estate holds third rank. The other important investment instruments for individual Turkish investors are time deposits, government bonds and equities. In the households' savings the most preferred gold instruments are; (i) government minted republic gold coins, (ii) time deposits in gold and (iii) gold jewellery (Tagtekin, 2016). The second one is M. Santhi's paper on gold perception of investors in Madurai City in India (Santhi, 2013). Santhi's survey was made among customers of the jewelry shops in Madurai City. 75 individuals attended to the survey. A simple questionnaire had been prepared to find which factors motivated individuals to buy gold and the risk involved in buying gold. The survey participants were asked to rank them on their priority. The factors appeared in this survey were liquidity and appreciation of gold (Santhi, 2013).

The survey in this study, however, focused on the financial market professionals trading in both national and international markets rather than randomly selected retail customers of physical gold products. The survey participants in this study were experienced traders and treasury managers of the Turkish banking sector. Such a targeted sample population help to sustain the main aim of this study that is to get a clear picture of the Turkish market professionals' view on gold as a financial asset, as central bank reserve and as a medium of exchange.

## **Data And Methodology**

### **Data**

In this research, the data was collected by conducting an online-survey in 2018. The sample population of the research consists of 407 market professionals working in Turkish financial market. The survey was sent by using a global data vendor's messenger application. The messenger application of this global data vendor is a service to its clients to chat and to share news, live data and analytics and is widely used by financial professionals with over 300,000 contacts in more than 30,000 firms in 180 countries (Refinitiv, 2019). The aim of using such a messenger application was to reach to the Turkish financial market professionals directly. This is a much better and easier method for collecting data than the traditional survey methods like posting mails to the addresses, sending e-mails or making face-to face interviews. As a result, 82 of the 407 professionals attended the survey but 81 of them completed the questionnaire.

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## Methodology

Methodology used in this research is the non-probability (non-random) sampling technique with a convenience sampling. Non-probability sampling is a sampling method in which researcher selects samples based on the judgment of the researcher rather than random selection. This method is used in studies where it is not possible to draw random probability sampling due to time or cost considerations. Convenience sampling used in this research was a non-probability sampling method where sample is selected from the population only because they are conveniently available to the researcher (Kitchenham & Pfleeger, 2002). The sample in this study is selected from the population consisted of banking and finance professionals in Turkey, mostly in the treasury departments of the Turkish banks. There are also survey participants from other financial institutions like broker firms and portfolio management companies, but the core of the sampling group was the treasurers of the Turkish banking sector. This kind of sampling is considered to give a clear picture of market professionals' view on gold. Also, it is much more convenient way to reach members of the sample population using an online messenger application of a global market data vendor.

For the survey a questionnaire was prepared based on the scale used by the Eurobarometer on the public perception researches on euro, which was issued by the European Commission's Directorate General for Economic and Financial Relations. The European Commission did this survey to measure changes in public opinion in Europe during the months preceding the introduction of euro. Eurobarometer's survey was one of the series of surveys initiated in March 2000. The last survey dated back to June/July 2001. The methodology used in that survey was that of Flash Barometer of the Directorate General for Press and Communication (Opinion Polls, Press Reviews, Europe Direct Unit), which took part in developing the questionnaire and handled survey administration (Flash Eurobarometer, 2001). The scale of Eurobarometer was used in this study because the extent of the research includes monetary aspects of gold.

The survey in this study consisted of two parts. In the first part, the demographic characteristics of the survey participants were examined. The second part, namely the descriptive part, consisted a scale of 19 questions on the perception of gold. The scale was a four-point Likert scale, included four statements; strongly disagree, disagree, agree and strongly agree. As mentioned above, the sample population of the research consisted of the 82 individuals working in the treasury departments of the banks, broker firms and portfolio management companies located in Istanbul.

The statistical analysis of the survey data was conducted using a statistics software. The significance and validity of the survey data were tested with this software. The demographic characteristics of the participants were summarized by frequency method. The survey data had a normal distribution at 95% significance level as a result of normality tests. Then parametric tests were applied. The results of the survey data was evaluated using one sample t-test and independent two sample t-tests.

One of the main aims of this study was to measure the perception scores of survey participants. First, the average perception score was calculated. Then maximum perception score of each survey participant was assumed to be 100. So the perception score related to each survey participant was calculated to this reference point. The mean perception score was calculated arithmetic mean. After calculation the perception scores, the demographic characteristics effecting the perception scores were analyzed by conducting independent sample t-tests and ANOVA tests in order to measure the effect of gender, department, institution, age and education level of the survey participants on their perception scores.

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## Results

### Demographic Characteristics of Survey Participants

The majority of the survey participants were banking employees working in the treasury departments of the banks' headquarters, between ages 30-49, with BA and MA degrees.

72% of the survey participants were bank employees and 73% of them were working in the treasury departments. 41% had a BA and 52% had a MA degree, only 6% had a PhD degree. 72% of the participants were male and only 28% were female. 79% of the survey participants were between ages 30 and 49. This means most of the survey participants are well-educated, and experienced treasurers of the Turkish banking sector. This also means that the sample group of the survey research was homogeneous.

### Descriptive Questions

If one looks at the answers given to the descriptive questions of the survey, it can quite easily be seen that the professionals in the Turkish financial market are very clear on many statements in the questionnaire. 85% of the participants gave positive response to the question, "Is gold a safe heaven in financial markets?". Gold is also perceived as a "traditional investment tool" (100% positive response) and a "significant asset" (%88 positive response). These results were as expected.

They also thought that gold transactions in the banking sector should be increased (77% positive response). This result shows that gold may have more place in the Turkish banking sector both in terms of trade volume and product type.

Gold was seen as an important central bank reserve asset after the US dollar and it was considered that the gold reserves of the Turkish Central Bank should increase and this would increase Turkish Central Bank's credibility (80% positive response).

Almost 90% of the survey participants supported the establishment of an "international gold bullion market in Istanbul". Parallel to this, they also supported a "Turkish Lira price fixing in gold transactions could be possible with an international gold bullion market in Istanbul". This result could be easily seen as a strong support for the establishment of such a market in Turkey. It is also clear that an international gold bullion market with hundreds of tons of transactions per day could raise Turkey to a higher level in the international gold market. Through the establishment of an international gold bullion market; local banks would be able to make high gold trade volume and easily deliver physical gold to their customers from their branches. In so doing, Turkish households' physical gold portfolio, called "under-the-pillow gold stock", could be part of the financial system more easily.

An interesting result of the survey is that 38% of survey participants supported the idea of "backing monetary aggregates by the Turkish Central Bank's gold reserves". The fact that 38% of the responses were very remarkable because never had such a policy been mentioned or proposed by any political authority in Turkey or by the Turkish Central Bank itself.

**Table 1:** Demographic Characteristics of Survey Participants

		<i>Frequency</i>	<i>Ratio (%)</i>
<b>Gender</b>	Male	59	72,0
	Female	22	28,0
	Total	82	100,0
<b>Age</b>	none	2	2,4
	20-29	13	15,9
	30-39	44	53,7

	40-49	21	25,6
	50-59	2	2,4
	Total	82	100,0
<b>Education</b>	BA	34	41,5
	MA	43	52,4
	PhD	5	6,1
	Total	82	100,0
<b>Company</b>	none	1	1,2
	Bank	59	72,0
	Broker Firm	9	11,0
	Portfolio Management	12	14,6
	Investment Fund	1	1,2
	Total	82	100,0
<b>Department</b>	Top Management	3	3,7
	Treasury	60	73,2
	Portfolio Management	9	11,0
	Marketing	1	1,2
	Other	9	11,0
	Total	82	100,0
<b>Monthly Salary</b>	None	3	3,7
	2-3 thousand TRY	3	3,7
	3-4 thousand TRY	12	14,6
	4-10 thousand TRY	42	51,2
	+10 thousand TRY	22	26,8
	Total	82	100,0

75% of the survey participants were against the use of gold as legal tender with the Turkish Lira in domestic market and 61% of them did not accept such a dual currency system, including gold coins with the paper money in circulation. But there is a 39% minority supported the idea of a dollarization-reducing gold currency. This 39% is also remarkable because of above mentioned reason.

It is also strange that 54% of survey participants believed that foreign trade can be paid with gold reserves as well as foreign exchange. At the same time 57% of them thought this would reduce the country's gold reserves. This result is a bit confusing. The Turkish market professionals consider gold as a payment instrument for foreign trade although they are against the use of gold as an official payment instrument in domestic market. This may be because Turkish financial market professionals know that gold is one of the most traded asset in international markets after the US dollar and the euro; therefore, they may consider gold as an international payment instrument.

**Table 2:** A Summary of Answers to the Descriptive Questions

<i>Questions</i>	<i>Positive Response (Agree/Strongly Agree)</i>	<i>Negative Response (Disagree/Strongly disagree)</i>
Gold is a safe heaven	85%	15%
Gold is an important financial asset	88%	12%
Gold is a traditional investment instrument in Turkey	100%	-
Gold transactions should increase in the banking sector	77%	23%
The priority ranking in Central Bank reserves	1. USD 2. Gold 3. EUR 4. US G. bonds 5. Turkish G. bonds	



Increasing Central Bank gold reserves increases its credibility	80%	20%
Monetary aggregates should be backed by gold	38%	62%
Which monetary aggregate should be backed by gold?		1. Reserve Money 2. Money in Circulation 3. M1 4. Emission
There should be an international gold exchange in Istanbul	68%	32%
If there is such an exchange, it could also be a gold price fixing in TRY	69%	31%
Gold as a legal tender with TRY in domestic market	24%	76%
Gold as a legal tender decreases dollarization	39%	61%
Decreasing dollarization in domestic market also decreases USD/TRY volatility	38%	62%
Gold payments in foreign trade	54%	46%
Gold payments in foreign trade increases gold import	75%	25%
Gold payments in foreign trade decreases gold reserves of the country	57%	43%

### Statistical Analysis of Survey Data

The statistical reliability of the survey data was measured by the Cronbach Alpha Test. This test is an internal consistency estimation that is suitable to be used when the questions are not scored as true-false and scored as 1-3, 1-4 and 1-5. The scale is reliable in cases where Cronbach alpha value is 0.70 and above (George and Mallery, 2003). The Cronbach alpha value for the descriptive questions of the survey was found 0.758. Thus, it was concluded that the scale used in the survey is valid and reliable.

**Table 3:** The Reliability of Survey Data

<i>Cronbach Alpha</i>	<i>Reliability</i>
0,758 > 0,7	Good

### Perception Scores

One of the main aims of this study was to measure the perception scores of the market professionals working in the Turkish financial market. This was crucial for understanding the level of importance given by the professionals to the gold and also crucial for further researches on gold based on different aspects like being a safe heaven, a central bank reserve or being a payment instrument respectively. The average perception score was calculated with the data obtained from the survey. For the calculation of the perception scores, the descriptive questions no. 5 and no. 7 were excluded. The maximum perception score of each survey participant was assumed to be 100. Then the perception scores related to each survey participant was calculated to this reference. The mean perception score was calculated by using the arithmetic mean of the scores. Perception scores above 50 considered as positive perception for each individual and group attending the survey and perception scores below 50 is considered as a negative perception. ,

**Table 4:** Perception Score Statistics

<i>Mean</i>	<i>Std. Deviation</i>	<i>Minimum</i>	<i>Maximum</i>
56,63	9,44	28,33	78,33

While 40.7% of the participants had a perception score below the average perception score, 59.3% were above the average. The average of the perception scores is 56,6%.

**Table 5:** Gold Perception Scores

	<i>Frequency</i>	<i>%</i>
Median	-	56,6
Over the median	33	40,7
Below the median	48	59,3
Total	81	100

The significance of the mean perception scores is tested by using one sample t-test with the hypotheses;

$$H_0 : \mu = 50 \text{ and}$$

$$H_1 : \mu \neq 50$$

where  $\mu$  is mean of perception score.

The mean of perception scores was calculated 56.6 with a 9.4 standard deviation. 95% of the perception scores of the survey participants were between 37.8 and 75.4. It is seen that the perception scores of the participants was above the average according to the evaluation made over 50.

**Table 6:** One Sample t-Test Statistics and Results

<i>N</i>	<i>Median</i>	<i>Std. Deviation</i>	<i>Std. Error</i>
81	56,6252	9,44255	1,04917

Test Value = 50

<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	<i>Mean Difference</i>	<i>95% Confidence Interval of the Difference</i>	
				<i>Lower</i>	<i>Upper</i>
6,315	80	,000	6,62519	4,5373	8,7131

Because  $t_h = 6,315 > t_{80;0,05} = 1,99$  or sig. value  $0.000 < 0.05$ , we reject the  $H_0$ . This means, that the mean of the perception scores of the survey participants calculated as 56.6 is different from 50 is statistically significant with 95% confidence interval. According to this result the perception scores obtained from the survey data, there is a positive attitude from the survey participants towards gold

### Demographic Characteristics Affecting the Perception Scores

The effect of the gender, department, institution, age and education level of the survey participants on their perception scores were analyzed. The effects on each group and their group perception scores are listed in Table 8.

The difference in the perception scores related to the gender of the survey participants were tested running independent samples t-test whether this difference was statistically significant or not.

**Table 7:** Independent Samples Test Results

<i>Levene's Test for Equality of Variances</i>						
<i>t-test for Equality of Means</i>						
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>
Perception score	Equal variances assumed	6,171	,015	-1,841	78	,069
	Equal variances not assumed			-2,362	62,09	,021
		<i>Mean Difference</i>	<i>Std. Error Difference</i>	<i>95% Confidence Interval of the Difference</i>		
				<i>Lower</i>	<i>Upper</i>	
Perception score	Equal variances assumed	-4,366	2,371	-9,086	,3545	
	Equal variances not assumed	-4,366	1,848	-8,060	-,6719	

Since 2-tailed significance value 0.021 is smaller than 0.05, hypothesis  $H_0$  was rejected and hypothesis  $H_1$  was accepted. This means that the difference in perception scores calculated based on the gender is statistically significant. That shows gender has an effect on the perception of gold.

For other subgroups, ANOVA method was used to test hypotheses on whether the difference between the means of more than two groups was statistically significant. In the ANOVA tests, if the p value was greater than 0.05,  $H_0$  hypothesis was accepted, which means, there was no statistically significant difference between the means. If the p value was less than 0.05, the  $H_0$  hypothesis was rejected.

**Table 8:** Mean, Min. And Max. Values of Perception Scores

	Mean	Minimum	Maximum
Gender			
Male	55,3953	28,33	78,33
Female	59,7614	46,67	68,33
Total	56,5414	28,33	78,33
Department			
Top Management	43,8900	31,67	51,67
Treasury	57,9442	31,67	78,33
Portfolio Management	56,2956	38,33	66,67
Marketing	60,0000	60,00	60,00
Other	51,4575	28,33	68,33
Total	56,6252	28,33	78,33
Institution			
Bank	56,6100	28,33	78,33
Broker Firm	55,9256	31,67	63,33
Portfolio Mng. Co.	56,8042	38,33	66,67
Total	56,5621	28,33	78,33
Age			
20-29	58,2054	43,33	68,33
30-39	56,8939	31,67	78,33
40-49	55,1655	28,33	68,33
50-59	58,3350	51,67	65,00
Total	56,7086	28,33	78,33
Education			
BA	54,6464	28,33	68,33
MA	58,0228	31,67	78,33
PhD	57,6660	48,33	65,00
Total	56,6252	28,33	78,33

Income			
2.000 - 3.000	46,6633	38,33	58,33
3.000 - 4.000	55,9725	43,33	68,33
4.000 - 10.000	55,6502	28,33	78,33
10.000 +	59,4691	46,67	68,33
Total	56,4313	28,33	78,33

**Table 9:** Results of ANOVA Tests

	<i>F Values</i>		<i>p</i>	<i>H<sub>0</sub></i>
	<i>Calculated</i>	<i>F-Table</i>		
Department	2,458	2,49	0,053	Fail to reject
Institution	0,024	3,11	0,976	Fail to reject
Age	0,306	2,73	0,821	Fail to reject
Education	1,233	3,11	0,297	Fail to reject
Income	1,2962	2,73	0,127	Fail to reject

Because all the *p* values were greater than the value 0.05, all the  $H_0$  hypothesis for the subgroups could not be rejected. This means, the departments and institutions the survey participants worked at, the age, income and education levels of the survey participants had no effect on their perception scores. In sum, it is possible to say that the perception of participants towards gold was above the median value, namely above 50. And only gender had a significant effect over the perception score. The other variables had no significant effect on perception.

The statistical analysis of the survey data shows that the survey was statistically reliable and valid. The gold perception score was calculated 56.6%, confirming a positive perception of gold among Turkish market professionals. ANOVA tests showed that the perception of gold changed neither with the education and income level nor with the institutions and the departments at which survey participants worked. However, only the gender had an effect on the perception of gold. This means, the female survey participants had a higher perception of gold than the male ones. This result is not considered unusual because this is a well-known behavior in Turkey where female consumers have more tendency toward gold products than male consumers.

### Conculusion And Discussions

In this study, we tried to analyze the perception of gold among market professionals in Turkish financial market. The analysis was conducted with a survey among the employees of banks, broker firms and portfolio management companies located in Istanbul. As a result of statistical tests, it is possible to say that the survey results are statistically significant and valid. The perception score was calculated 56.6 out of 100, and this means gold had a positive perception among professionals in Turkish financial markets.

The survey analysis confirms three main points; (i) gold is regarded as a safe haven, a traditional investment instrument and a significant financial asset in Turkish financial market, (ii) Turkish financial market professionals believe that the weight of gold transactions in Turkish banking sector should be increased. These results indicate that gold could have more place in the Turkish banking sector both in terms of transaction volume and product range, (iii) gold is considered as an important reserve asset for the Turkish Central Bank after the US dollar alongside with euro. The Turkish financial market professionals believe that the Turkish Central Bank should have more gold reserves and increasing gold reserves increase the credibility of the Turkish Central Bank. This proves that gold is not only a commercial commodity, but also a strategic asset. Under extraordinary circumstances, such as war and economic crises, gold

reserves are an important financial resource for governments. This study also proves this argument in case of Turkey.

Almost 90% of the survey participants support the establishment of an “international gold bullion market in Istanbul”. They also support, “Turkish lira price fixing in domestic gold market could be possible with an international gold bullion market in Istanbul”. This result could be easily seen as a strong support for the establishment of such a market in Turkey. It is also clear that an international gold bullion market with hundreds of tons of transactions per day could raise Turkish domestic gold market to a higher level in the international gold market. With the establishment of an international gold bullion market in Istanbul, local banks would be able to trade gold with much higher volumes and would easily deliver physical gold products to their customers. With such an improved gold market Turkish households’ physical gold portfolio, so called “under-the-pillow gold stock”, could more easily be a part of the domestic financial system.

An eye-catching result of this study is that 38% percent of the survey participants supported the idea of “backing monetary aggregates by the Central Bank's gold reserves” and 39% supported the idea of a "using gold as a currency reduces dollarization”. This is very crucial as no such policy has ever been mentioned or proposed by any political authority in Turkey.

Finally, it is possible to say that Turkish financial market professionals consider gold as an important financial asset, investment instrument and central bank reserve asset. They also support the idea of establishment of an international gold bullion market in Istanbul. However, the perception of gold as a legal tender is quite weak at least for the domestic market.

The studies on perception of finance professionals towards gold is limited in the related literature and the most important contribution of this study to the literature is that it aimed to measure the perception of gold among professional corporate investors in a financial market. Even though the scope of this research was limited as it only covers finance professionals in a local market, namely Istanbul. If the future studies could be done in global financial centers like London or New York which are important gold trading centers, they could make a significant contribution to the related literature.

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