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REFORMATION OF THE GOLD SECTOR IN THE TURKISH ECONOMY

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A project report submitted to the Faculty of Engineering, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Engineering.

Johannesburg, 1998

DECLARATION

I declare that this project report is my own, unaided work. It is being submitted for the Degree of Master of Science in Engineering in the University of The Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

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_____ **day of** _____ **1998**

ABSTRACT

The gold sector in Turkey, where there is no mine gold production, is based only on gold processing and jewellery manufacture, driven by a strong domestic demand for gold products. In the Turkish economy which was State-driven since the establishment of the Turkish Republic in 1923, the gold sector had been ignored and driven underground as a result of strict regulations. Despite operating through illegal channels, the sector had already accumulated a c nsiderable amount of technical and financial capacity when the policymakers realised the potential of the sector in 1983, and started the liberalisation movements. The liberalisation process produced positive results such as eliminating gold smuggling and legalising the gold imports which had increased to 163 tonnes in 1993. It also demonstrated the potential of the sector and revealed the need for further reformation and development in the market structures. However, the mere legalisation of the sector was not enough and the Government had to approve and include the implementation of a Gold Sector Reform Plan in its protocol in 1993. The model included the initiating and developing the major components of an efficiently operating gold sector, which are gold mining, a gold exchange, gold refinery, gold based financial instruments, the jewellery manufacturing industry and the promotion of the propensity to save in gold.

The Istanbul Gold Exchange (IGE) was given the highest priority in the implementation process because it would necessarily pave the way for Turkish investors to adapt to 'paper' gold instruments. Success in the operation of the IGE and the introduction of gold backed financial instruments would accelerate preparations to implement the remaining components of the envisaged reform process.

In order to integrate with the international gold market, it was necessary for gold traded on the IGE to meet the international quality standards in terms of purity and quality. Poor quality standards were caused by the existence of a number of small unregulated refining operations. The solution to the problem, and also the challenge, lay in the establishment

of a refinery with the capacity to produce semi-final gold products, and also in the refining of scrap gold.

Even after the liberalisation process, the Turkish jewellery manufacturing industry still faces various financial and location problems, and is still constrained by the tax system as well as constraints relating to taxation and unfair competition within the European Customs Union. These problems are being addressed within the context of the gold sector reform model in order to maximise the potential of this sector.

Essentially, Turkey is not a gold producing country, and its gold sector sources most of its raw material from outside the country. Increased exploration activity has, however, identified some reserves which are due to come into production. If environmental constraints are overcome and these mines do in fact come into production, they will pave the way for the development of a Turkish gold mining industry.

The World Gold Council (WGC), through its branch in Istanbul, made significant contributions to the process of liberalisation of the Turkish market, the compilation the Gold Sector Reform Plan, and the implementation of its various components. The WGC also assisted the government by providing consultancy services such as the expertise lent in the establishment of the Istanbul Gold Exchange.

This study records the various stages and components of the liberalisation and reformation process in the Turkish gold sector. The purpose is to evaluate the successes achieved and the failures faced in order to extract certain lessons which can be utilised by policymakers who are in a position to develop a non-existing or illegal sector.

In dedication to my dear family,

Orhan - Fatma - Hakan ÖNCEL

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1. INTRODUCTION

Anatolia, the so-called Asia Minor, where some 85% of the Turkish Republic's land is located and Istanbul, together embrace a very long history of gold trading. The first gold currency was minted in the 8th Century BC by the Lydians living in the Western Anatolia. After the collapse of the Roman Empire, the major gold production centres were first conquered by the Byzantian Empire, and later by the Ottoman Empire, both of which were ruled from Istanbul (Saglam, 1993).

The attraction of gold as a store of wealth for the Turkish people is a well-known cultural phenomenon. Even after the introduction of various investment tools, which yielded higher returns by the flourishing banking sector during the 1980's, interest in gold did not abate. In terms of the world gold demand and as part of the so-called 'Oriental Gold Gauge' comprising countries in the Middle and Far East, Turkey is a major gold importer. Turkish gold imports reached a peak of 163 tonnes in 1993 (Murray, et al; 1995). It is estimated that gold held in the form of coins and jewellery amounts to 5 000 tonnes, accounting for about 5% of the total world gold reserve of 110 000 tonnes above ground and 13% of central banks' gold reserves in 1994 (Murphy, 1994). This quantity of gold has a value of approximately US$55 billion, at a price of US$350/ounce.

All the factors necessary to stimulate the foundation of a robust gold jewellery manufacturing industry such as domestic and foreign demand, cheap and skilled labour, expertise and huge amounts of idle gold holdings are present in the market. Logistically, Turkey is situated in a strategic locality. With 15% of its geographic area situated in Europe and the rest in Asia it has, for centuries, served as a commercial bridge between East and West. Turkey has access to markets which extend from the Atlantic Ocean to the Indian Peninsula and the Far East. The country is situated

adjacent to the Middle East and the Central Asian markets which control most of the energy resources of the world and which therefore command a very high purchasing power. In addition to this, the Turkish people also have kinship with the people of the Turkmen Republics of the Commonwealth of Independent States (CIS) which adds further to the market potential. Turkey has also been a member of the European Customs Union since 1 January 1996, and its close proximity to the prominent European gold markets in London and Zurich creates a transportation advantage. With its population of 65 million people, the Turkish domestic market also offers a dynamic demand for gold products.

On average, the Turkish gold market imports approximately US$1.6 billion worth of gold (150 tonnes) per annum. Despite the facts that gold trading was prohibited until the mid-1980's, that there was no formal market for gold, and that banks did not conduct gold transactions, trade still amounts to US$4.5 billion (450-500 tonnes) per annum (Demiralp, 1994). Trading was only conducted in the informal Grand Bazaar market under its indigenous rules and constraints. Participants in this market, who did not have the advantage of a legal infrastructure and operated under mutual trust principles, were confined to third and fourth generation merchants of the Grand Bazaar (Akman, 1996). The country's natural competitiveness and comparative advantage in further processing gold, which is fortified by a strong domestic demand, is borne out by the significant informal gold market which flourished prior to liberalisation of gold and foreign exchange trade in 1980's.

Although liberalisation of the Turkish gold and foreign exchange markets, which started in 1983, freed the sector from some of the impediments it faced, the jewellery manufacturing sector in particular was not freed from all the financial constraints and infrastructural shortcomings which arise from the traditional prohibitive organisation of the sector. The majority of the small-scale gold jewellery manufacturers, who comprised the bulk of the jewellery manufacturing industry, still depended on advance payments from the jewellery wholesalers for working capital (Akman, 1996). The

workshops, which employ traditional jewellery manufacturing methods, did not have the capacity to make the necessary technological advances to improve product quality. Besides, the ancient Grand Bazaar, which is located in one of Istanbul's most congested business centres, lacked the infrastructure necessary for expansion of its production capacity (Oztepe,1996).

These organisational shortcomings of the gold jewellery manufacturing sector in Turkey began to improve as a result of the steps taken within the context of a reform initiative, components of which were outlined in the Government protocol proclaimed in 1993. The Istanbul Gold Exchange (IGE), envisaged to be a formal centre of gold trade with a potential to attract participation from within Turkey and other countries in the region, was the planned initial step towards the improvement of the Turkish gold sector (Ertuna, 1994a). The intention was to establish the IGE which, coupled with the sanctioning of the financial sector to perform gold transactions, would initiate the mobilisation of the idle gold holdings in the country and create affordable gold credit facilities for the small scale gold jewellery manufacturers. After these two important steps, there followed the foundation of a modern large-scale gold refinery capable of supplying semi-processed gold products to be used in jewellery fabrication.

This report aims to illustrate the extent reached in the implementation of the gold sector reform in Turkey. The reform movements were stimulated by the developments in the gold market following the liberalisation in the Turkish economy in 1980's and early 1990's. After explaining the underlying economic factors which occurred during and after the liberalisation movement and which led to the drafting of a gold sector reform plan, the progress made in the reform areas and components such as the gold exchange, the financial sector and the gold refinery are scrutinised.

2. ECONOMIC DEVELOPMENTS LEADING TO THE REFORM DECISION

After the establishment of the Republic of Turkey in 1923, developments in manufacturing industry, trade and mining were initiated and conducted by the Turkish State via State Economic Enterprises (SEE). The majority of the industrial commodities were produced by the State and there was no competition in the Turkish commodity markets. Therefore, the prices in the Turkish commodity markets were pegged by the State instead of being determined by the price mechanism. In this economic environment, the sole aim of the enterprises was to produce commodities. Profit maximisation was not considered as a determinant factor for decision making in production or investment. As a result, besides the commodity markets, capital and foreign exchange markets did not develop as SEE's also played the role of banks transferring public savings to commodity manufacturing industries. During this period, the interest and foreign exchange rates remained almost constant.

In the 1950's, Government maintained policies which supported free enterprise and favoured the development of Turkish private sector. Credits supplied from the United States of America and the World Bank were channelled to the private sector. However, the economic policies implemented were not based on the establishment of free markets where competition prevailed. The State and private economic enterprises were protected by high tariff walls. On the contrary of the initial aim, the contribution of the SEE's to the economy increased during 1950's. Despite the economic development achieved during this period, the State-driven economic policies failed and the subsequent political disorder ended in a military coup.

During the period from 1960 to 1980, development plans outlined by the State aimed at incentivising the private sector while maintaining the status of the SEE's. There was limited competition in the commodity markets dominated by oligopolies and SEE's which were protected by import substitution policies. The interest and

exchange rates were still determined by the State. This structure of the economy could not overcome the problems caused by the oil crises during the 1970's and the period from 1960 to 1980, once again, ended in economic chaos and a military coup. The inflation rate soared while the growth rate of the Turkish economy became negative.

In January 1980, Government set out a liberalisation programme outlining the restructuring of the Turkish economy and integrating it with the world economy. The targets set for the programme were the elimination of foreign exchange problems caused by the gap in the balance of payments, control of the inflation rate and enhancement in the competitive capacity of the Turkish economy. The main principle for the implementation of the programme was liberalisation of the Turkish commodity, foreign exchange and capital markets.

The Turkish gold market was identified as one of the markets with significant potential for increased competitive capacity and contribution towards the accomplishment of the targets set out in the liberalisation programme. Because of the strong domestic demand for gold products, the Turkish gold market had flourished despite strict foreign exchange and foreign trade controls. As there was no mine gold production in Turkey and gold could only be supplied from outside the country, the gold sector had developed informally as an integral part of the illegal foreign currency market. In order to legalise this lucrative market and draw its potential to the formal economy, Government implemented necessary changes in the related legislation and created the essential free market structures.

The first step taken was the establishment of the Gold against Turkish Lira Market in the capacity of the Central Bank in 1984. Turkish citizens could buy gold bullion imported by the Central Bank and pay in Turkish Liras. Despite its operational flaws which led to its abolishment in 1989, it has served to close the gap between the domestic and foreign prices of gold.

The closure of the Gold against Turkish Lira Market was followed by the establishment of the Gold against Foreign Exchange Market in the Central Bank. The Central Bank imported gold bullion on a consignment basis and sold it to the domestic buyer. The payment for gold bullion was made in foreign exchange which eliminated the exchange rate risk. This market proved to be very successful and the amount of gold formally imported increased significantly.

These liberalisation movements generated positive outcomes like the decrease in price margins and the increase in gold imports. These developments in the market helped the jewellery manufacturing sector to flourish and gradually materialise its competitive capacity. In 1993, the essence of a reform plan specified for the Turkish gold sector was seen by the Government and a reform model was outlined in the Government protocol. The details of the economic background leading to the drafting of a reform model in the Turkish gold sector stated above are given in the section below.

2.1 The Liberalisation of the Turkish Gold Market

2.1.1 *Background to the liberalisation process*

2.1.1.1 Rationale behind the process

Liberalisation began with a Government decision on 24 January 1980 which was aimed at the integration of Turkish economy with the developed economies. In order to generate a successful integration with the world's free markets, a country's economy must mobilise its idle economic potential and exploit its comparative advantages that enable the country to compete internationally. The existence of a lucrative informal gold sector, including gold holdings, gold trade and gold entrepreneurship, was an obvious indication that this was a sector of the Turkish economy with significant competitive potential.

Before the liberalisation took place the gold sector in Turkey had developed as far as it could as an underground, illegal line of business activity. The sector was not monitored by the Government and remained an introverted and closed organisation (Ertuna, 1994b). Lacking the capacity to regulate and tax this thriving business activity, the Government decided to create a legal framework which would formalise gold trading and gold jewellery manufacturing, and assist the members of the sector to establish and expand legitimate businesses. The potential of the gold sector was revealed with the abolition of the foreign exchange restrictions, development of the tourism sector and the stimulation of exports through incentives. Initially developments started with the liberalisation of the gold sector, but this subsequently took on major reform proportions.

2.1.1.2 Historic role of gold in the economy

Gold played different roles at different stages of economic development in Turkey. After the establishment of the Republic of Turkey in 1923, and until 1960, various Governments accumulated gold reserves in the Central Bank in order to back the national currency. During this period, Government maintained strict control over foreign exchange and foreign trade which restricted the development in the gold market (Ertuna, 1994a).

Between 1960 and 1980, the various Governments in power controlled the gold trade by means of a law called 'Protection of the Value of the Turkish Currency', legislated in 1962 in an attempt to prevent gold smuggling in the country. According to this legislation, the Ministry of Finance was authorised to regulate, restrain and prohibit the export of precious stones and products, imports and exports of precious metals and, if deemed necessary, the domestic trade in precious metals. Although this law was legislated with the intention of eliminating gold smuggling, it simply drove participants further underground and resulted in increase in illegal gold transactions.

During this period, Turkey imported 80 tonnes of illegal gold a year (Ertuna, 1994a).

The role of gold in the period prior to liberalisation was that of a medium of exchange for all types of smuggling. Because the foreign exchange rates were fixed, gold provided the flexibility needed for foreign trade. A parallel market for gold and foreign exchange was developed in Istanbul in Tahtakale and the Grand Bazaar, the participants in the market being the same for both gold and foreign exchange transactions. During the oil crisis towards the end of 1970's, when the foreign exchange crisis reached its peak and when the Central Bank was unable to make transfers for the payments of raw materials imports needed by the industrial sector, the market in Tahtakale made the necessary transfers of payment for imports. Although a vast amount of gold is believed to have left the country, the Turkish economy managed to keep its manufacturing industry afloat by means of this illegal market mechanism (Ertuna, 1994b).

2.1.1.3 Initiation of the process

The era of Government control over the market from 1960 to 1980, ended in economic chaos. Inflation reached three digit levels, annual growth rates were negative, and Turkey was unable to service its foreign debts. The manufacturing industry, which had developed behind tariff walls under the import substitution policies, lost its competitive power in both the domestic and foreign markets. On 24 January 1980, the Turkish Government announced a programme to transform the closed economy (that characterised the country's markets) and integrate it with global markets. The cornerstone of the programme was the establishment of free market rules in all commodity, foreign exchange and capital markets (Demiralp, 1994). These measures had a major impact on liberalisation of the gold trade.

The first step was to liberate exchange rates. In order to establish equilibrium in the foreign exchange market, the Government had to take the price of gold against foreign

exchange into consideration. This required the liberalisation of the gold trade since the skills perfected in illegal gold transactions had made foreign currency operations easy for the gold sector participants. A two-tier market come into existence, where there was an official market rate pegged by the Central Bank together with a parallel unofficial market rate for foreign exchange. In order to import gold, manufacturers and traders supplied their foreign exchange from the parallel market. The foreign exchange requirement to import gold put upward pressure on foreign exchange prices in parallel markets and increased the spread between the official and parallel rates. Consequently, importing gold through illegal channels increased the cost of gold in Turkish markets (Ertuna, 1994a).

Within the framework of the programme outlined in 1980, the Cabinet issued new decisions in 1983 and 1984 to initiate the liberalisation of the gold trade. Government sanctioned gold imports and domestic trade, while gold exports were subjected to permits from the Ministry of Finance. The rules regulating gold imports were set by the Ministry of Finance and applied to all precious metals, precious stones and their products. Another important aspect of these decisions was that they provided a mechanism to fix the gold price. The authority to establish the principles for pegging foreign exchange rates and the gold price against the Turkish Lira was delegated to the Central Bank. These major steps towards liberating the Turkish gold market in Turkey recognised the relationship between foreign exchange rates and gold prices, which had been previously ignored by the authorities (Ertuna, 1994a).

2.1.2 *The Gold Against Turkish Lira Market*

2.1.2.1 Nature of the mechanism

The Central Bank immediately responded to the abovementioned Government initiatives and by the end of 1984, it developed a mechanism to import gold. The mechanism was the establishment of the 'Gold against Turkish Lira Market', where

gold bullion was imported from the Bank of Switzerland on a consignment basis and sold to individuals and companies in the domestic market against Turkish Lira.

2.1.2.2 Problems encountered

However, the aforesaid attempt to create an efficient and legal gold market proved unsuccessful. *One problem* was that while the man on the street could buy gold at Central Bank branches, the financial institutions were not involved. It amounted to a retailer market, with no recognised institutional members except the Central Bank. Another problem was that the sale of gold in Turkish Lira added exchange rate risk to the price risk. This occurred because the foreign exchange rate was subjected to significant upward changes between the time that the price was fixed and the time of actual sale. Because the gold price was fixed in dollars, the purchaser ended up incurring unanticipated costs in Turkish Lira, as the Lira price escalated before actual sales took place.

A further problem was that the establishment of the market was ill-timed. At the time when it launched the Gold against Turkish Lira Market, the Central Bank did not have sufficient foreign exchange reserves for gold import. The result was that; soon after the establishment of the market, the Central Bank had to increase the price of gold in the domestic market in order to reduce gold sales and prevent the depletion of foreign exchange reserves. This, in turn, reduced the competitive capacity of the jewellery producers and created an incentive for gold smuggling (Ertuna, 1994b).

2.1.2.3 Negative effects

It was estimated that when the Central Bank could not maintain sufficient foreign exchange reserves between 1984 to 1986, some 80 to 100 tonnes of gold was annually consumed in Turkey. Between 15 and 20 tonnes came from the recycling of scrap gold returned to jewellers (Ertuna, 1994a) and the balance had to be imported. Reluctance

to import gold on the part of the Central Bank resulted in unauthorised gold traders filling the gap in the market by importing gold through parallel channels. Turkish jewellers and gold traders who had the ability to import gold through illegal channels capitalised on the supply shortage in the market. They made enormous gains at the expense of smaller gold manufacturers and traders, by selling gold at prices higher than those ruling on the international markets.

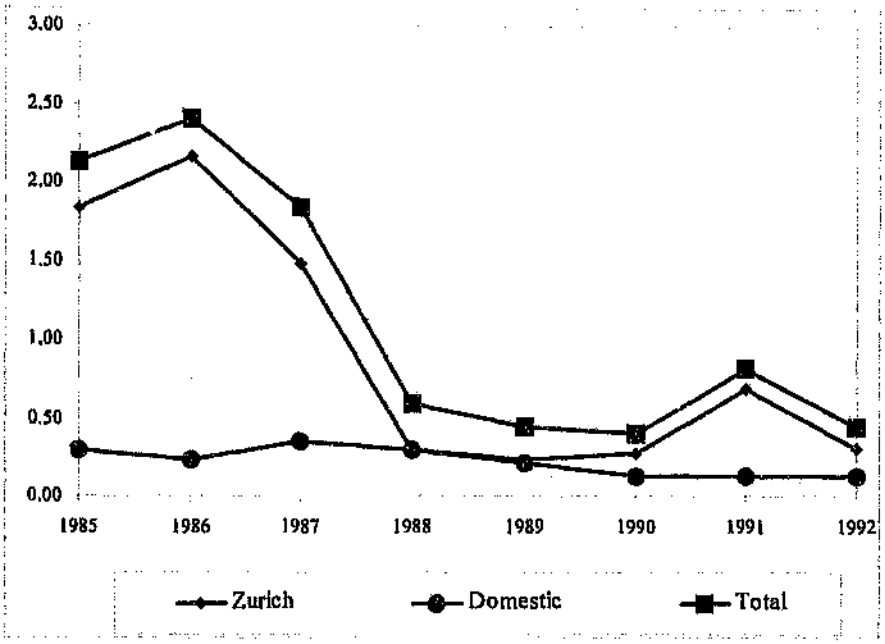
2.1.2.4 Positive effects

Despite all its drawbacks, which disrupted the operation of the gold market in the country, the "Gold against Turkish Lira Market" continued to operate until February 1989. This market, however, did not only have negative effects. One positive outcome was that it initiated a decrease in the price difference between the Zurich and Istanbul markets, to the extent that the Central Bank could finance formal gold imports, especially after 1986. This effect is illustrated in the price margin decrease displayed in Figure 1.

In July 1988, the Government gave the Central Bank the authority to amend the regulations for gold trade. After analysing the imperfections of the 'Gold against Turkish Lira Market', the Central Bank decided to establish a wholesale gold bullion market in order to eliminate illegal gold market operations. The new market was envisaged as a two-way market where parties could not only purchase, but also could sell gold.

Figure 1: Gold Price Margins

(%)



Source: World Gold Council, 1993

2.1.3 *The Gold against Foreign Exchange Market*

2.1.3.1 Nature of the mechanism

The Central Bank established the 'Gold against Foreign Exchange Market' on 29 February 1989 as part of the Foreign Exchange and Banknote Markets. The Central Bank preserved its status as the sole authority to [illegible] gold bullion. The payment for gold purchased was made with foreign exchange or foreign currency which eliminated the exchange rate risk.

This was achieved by a mechanism whereby the Central Bank sold gold from Loco London (the current price in London) plus US$22 and plus the cost due to the

compulsory exchange transfer (Akman, 1994). Banks and financial institutions were also given the authority to trade gold among themselves against foreign exchange or foreign currency. There were 17 authorised establishments and banks which bought gold from the Central Bar ., and passed it through to the secondary market in the Grand Bazaar where it reached the domestic market.

The new gold market was connected to the world gold markets with the Central Bank acting only as a broker by matching sales and purchases and not maintaining gold positions. Gold bullion and gold bars which were traded in the market were imported into the country from various suppliers on a consignment basis. The consignment stocks were kept in the Istanbul and Ankara branches of the Central Bank to facilitate fast settlement and delivery. All transactions were in physical form and there were no forward sale contracts.

2.1.3.2 Positive effects

The establishment of the 'Gold Against Foreign Exchange Market' can be regarded as the most important development in the liberalisation of the gold market in Turkey. It was well received by the sector and showed steady growth. As shown in Table 1, the trend in domestic gold consumption estimated at about 100 tonnes per annum prior to 1989, escalated to a level of 150 tonnes per annum. Only a small portion of the imported gold was kept for reserves in the Central Bank, and the rest was sold to the domestic market (Table 1). Except for minor shipments, there was no more gold smuggling. On the other hand, although the market was intended to be a two-way market, to buy and sell on, only an insignificant amount of gold sold returned to be resold on the market (Ertuna, 1994a).

Table 1: Imports through the Gold against Foreign Exchange Market (Tonnes)

YEARS	TOTAL IMPORTS	TREND IN IMPORTS	SALES TO DOMESTIC MARKET	INCREASE IN GOLD RESERVES
1989	90.186	103.770	90.141	0.045
1990	145.462	115.405	144.400	1.062
1991	113.365	127.040	112.164	1.201
1992	130.191	138.675	130.132	0.059
1993	163.226	150.309	163.226	0.000

Source: World Gold Council, 1993

2.1.3.3 Drawbacks still encountered

The success of the new gold market did not end the complaints coming from the gold dealers and manufacturers. The most common objection was to the monopoly position of the Central Bank where only it, and not the market, could control the price. The Central Bank officials contended that it acted only as a broker serving as a bridge between the gold suppliers and the domestic buyers. The Central Bank also claimed that it eliminated possible unfair competition among gold suppliers by being the sole broker in the system. (Ertuna, 1994a)

2.1.3.4 Adjustment made

However, in March 1993, a change in the related regulations made it possible for the gold price to be determined by the market. The import and export of gold bullion became subject to declaration. The permission to import gold was given to the Central Bank and the banks that would be the members of the yet to-be-established gold exchange. The application of this regulation had to wait for the establishment of the

Istanbul Gold Exchange (IGE) on 26 July 1995.

2.2 Consequences of the Liberalisation

2.2.1 *Decrease in Price Margins*

2.2.1.1 Quantification of the price margin decrease

The liberalisation of the gold market narrowed the gap between the gold prices in international markets and those in Turkey as well as the spread between ask and bid prices in Turkey. A study conducted for the period 1986-1992 (Ertuna, 1994a) demonstrated that the difference between the gold prices in Zurich and Turkey declined from a level of 1.82% to 0.36% (Table 2). As shown in Table 3, this implied a substantial price decrease of about US$200 per kilogram of gold (current gold price was in the range of US$420-430 per ounce). The difference between the purchase and sale price of gold also declined.

Figure 1 shows the drop in price margins during the liberalisation period starting in 1985. It displays Zurich and domestic price margins for the 1985 to 1992 period. The Zurich margin shows the percentage differences between the prices of gold on the domestic market and in Zurich. It can be seen in Figure 1 and Table 2 that the average percentage difference in price between Istanbul and Zurich, which was 1.83% in 1985 before liberalisation measures were taken, decreased to 0.31% in 1992. On the figure, a decline can also be observed in the domestic trade margin which is the difference between domestic buying and selling prices. As seen in Table 2 and Table 3 trade margins in Turkey declined from 0.29% to 0.18% on average with a decrease in price difference from US$1.24 to US$0.66 per ounce. The increase in the Zurich margin in 1991 can be attributed to the increased domestic demand for physical gold during Gulf Crisis (Ertuna, 1994a).

Table 2: Gold Price Margins (%)

YEARS	ZURICH MARGIN	TRADE MARGIN	MARGINS TOTAL
1985	1.83	0.29	2.12
1986	2.16	0.23	2.39
1987	1.47	0.35	1.82
1988	0.30	0.29	0.59
1989	0.23	0.21	0.44
1990	0.27	0.13	0.40
1991	0.68	0.13	0.81
1992	0.31	0.13	0.44
Before Liberalisation	1.82	0.29	2.11
After Liberalisation	0.36	0.18	0.54

Source: World Gold Council, 1993

Table 3: Gold Price Margins (US$)

	ZURICH MARGIN	TRADE MARGIN	MARGINS TOTAL
US$/ounce			
Before Liberalisation	7.65	1.24	8.89
After Liberalisation	1.28	0.66	1.94
US$/Kg			
Before Liberalisation	246.1	39.99	286.09
After Liberalisation	41.31	21.23	62.54

Source: World Gold Council, 1993

2.2.1.2 Positive effects of price margin decrease

The reductions in the price margins strengthened the competitiveness of the gold jewellery manufacturers who utilised 90% of the gold bullion they purchased in jewellery production and sold 50% of their jewellery production through export or tourist sales. The gold brokerage facilitated by the Central Bank helped the jewellery manufacturing sector to enter a growth phase. In the period from 1985 to 1990, Turkish annual gold fabrication in carat jewellery excluding the use of scrap increased from 35.4 tonnes to 97.6 tonnes per annum. Turkey ranked fifth in gold manufacturers in 1990 after Italy, India, USA and Japan. In 1991, due to the Gulf Crisis, Turkey ranked seventh, after being taken over by Taiwan and Saudi Arabia (Murray, et al; 1996).

The reduction in the price differences also changed the perception of Turkish investors towards gold who considered gold to be a good long-term savings instrument. In an inflationary environment (the inflation rate in Turkey was 85% in 1996), it provides a hedge for savings. The appreciation in the Turkish Lira price of gold tends to be equal to the inflation in the long term (Saglam, 1993). However, the difference between the buying and selling prices reduces its attractiveness in the short term. The decrease in the liquidation loss of gold savings due to the reduction in domestic trade margin added to the attractions of gold as a short-term savings instrument (Ertuna, 1994a).

2.2.2 *Increas · in Gold Imports*

2.2.2.1 Description of increasing trend

While, prior to the liberalisation, 80 tonnes of gold was smuggled into the country, an accelerated trend in official imports was followed after 1989 and reached a peak of

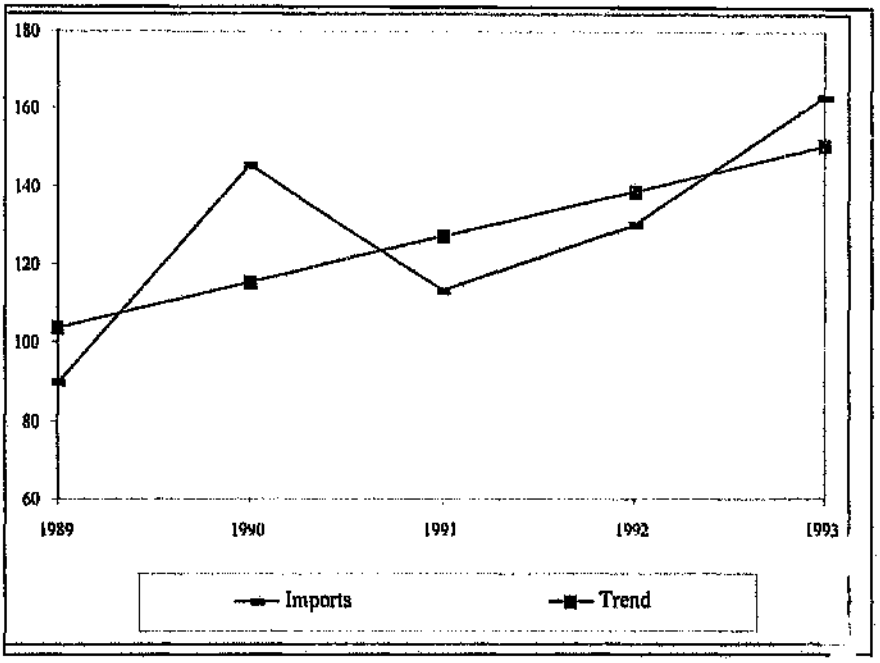
163 tonnes in 1993 (Table 1). As several alternative investment instruments developed in the flourishing Turkish banking and financial sector in this period, the largest part of this increased demand for gold came from the jewellery manufacturers (Ertuna, 1994a). The imports of gold through the Gold against Foreign Exchange Market in the period 1989 to 1993 are shown in Figure 2. Despite the temporary decline in 1991, due to the Gulf War and a decline in the number of tourists visiting the country, the booming jewellery sector pushed the trend up in 1992 and 1993. In 1994, imports plunged to 38 tonnes due to a major economic crisis in the country forcing the inflation rate up to 150%. 1995 was the year of recovery and the establishment of the IGE (Akman, 1996). Despite the anomalies caused by the Gulf War situation, there has been an increasing trend in gold imports.

2.2.2.2 Savings implications

Demand for gold as a savings instrument did not increase during the period of liberalisation because alternative financial investment instruments were developed during the same period. Liberalisation of the interest rates and the developments in the Turkish capital markets produced investment alternatives which could provide both a hedge against inflation and positive returns with less short-term risk. Nonetheless, these alternative savings instruments did not reduce the weight of gold in the savings patterns of the Turkish people because of gold's deep roots in Turkish culture and heritage.

Figure 2: Gold against Foreign Exchange Market

(Tonnes)



Source: World Gold Council, 1993

2.3 The Gold Sector Reform Decision

The liberalisation programme, especially the liberalisation of the exchange rates and foreign gold trade regulations, increased the importance of the gold sector and attracted the attention of the policy makers. As explained above, gold imports increased fast and reached 163 tonnes, valued at some US$1.9 billion in 1993 (Ertuna, 1994a). About half the imported gold was re-exported directly in bullion form or indirectly as jewellery.

The members of the industry were of the opinion that a solution to the financial

inefficiencies would result in a boom in jewellery production capacity and quality since there was a significant potential for expansion. The main factors creating this potential were the talented, cheap labour and the expertise accumulated through centuries. The improvements generated in the jewellery manufacturing in terms of the quality, design and distribution were prospective. The most important problems faced by the gold sector were the difficulty in financing working capital and the necessary improvements in production technology. Besides, the sector needed assistance in planning and devising effective marketing strategies (Akman, 1996).

It was assumed that a portion of the gold held by the Turkish people as jewellery (estimated to be about 4 000 tonnes) can be recycled to meet working capital requirements of the jewellery sector. In order to establish the market structures necessary to attract scrap gold to the manufacturing sector, banks had to be motivated to launch gold backed instruments by means of changes made in the capital market regulations. Therefore, the gold sector reform is closely linked to the financial sector reform which was also included in the 1991 Coalition Government Programme.

2.3.1 *The Financial Sector Reform*

The Turkish financial markets are monitored by the Capital Board Market which is an independent body authorised by the Capital Market Board Act. This Act was amended on 13 May 1992 to provide for the implementation of the financial sector reform and for the development of Turkish financial markets to its full potential. The policy makers had recognised the necessity of gold backed financial instruments. The Capital Market Board was delegated to supervise the development of new financial products and to regulate the markets in which they were traded. The Capital Market Board also emphasised the development of investment companies and investment funds which are allowed to invest in gold and other precious metals. The Communiqué published by the Capital Market Board on 31 July 1992 sanctioned the inclusion of gold in investment funds up to 10% of the total portfolio holding (Sonmez, 1994).

2.3.2 *Gold Sector Reform Model*

2.3.2.1 Policy approach

Despite the changes made in the Capital Market Board Act in 1992, the sector still lacked the legal infrastructure providing for the introduction of a gold standard and the establishment of a formal market for gold trade. The revised Capital Market Board Law legislated in April 1993 provided the basis for the establishment of an exchange for precious metals. The Minister in charge of the Under-Secretariat of Treasury and Foreign Trade was authorised to establish markets for foreign exchange and precious metals (Demiralp, 1994). The Ministry was also given the task of drawing up the framework of regulations in these markets as well as setting up a supervision and control system for the markets and their members.

As the potential for the strengthening and development of the gold sector in Turkey became evident and the change in the Capital Market Board Act provided the legal framework, attitudes and plans for the reformation of the gold sector began to clarify. In 1993, the economic programme of the Second Coalition Government (formed on 20 June 1993) outlined a plan for the transformation of the sector. The plan emphasised the development of gold-backed investment instruments and derivatives as the means by which the Istanbul market could be developed into one of world's prominent financial and commercial centres " ...to add the existing gold potential to country economy and to increase the gold exports". The programme stated that:

"In order to activate the present potential of the country in gold to contribute to the economy and to increase the exports of gold, a gold exchange will be established. Together with this development, financial instruments and derivatives based on gold will be introduced."

"Futures markets based on commodities and financial instruments will be established. This will provide exporters in Turkey with the chance to hedge and make long-term plans."

"With the development of the gold market coupled with the result of financial innovations, Istanbul will be developed to be one of the prominent financial and commercial centres of the world."

2.3.2.2 Structure of the model

The economic programme of the Government provided a model for what is known as the Gold Sector Reform. The model for the reform of the Turkish gold sector was to be implemented as a part of the process of liberalisation initiated by the pioneering attempts of the Government and the emerging potential of the sector. It was proposed that this reformation would influence or initiate six major components of the gold market:

- The gold jewellery sector
- Increased propensity to save in gold
- The Istanbul Gold Exchange
- Gold backed financial instruments and derivatives
- Gold refinery
- Gold mining

2.3.2.3 Objective of the model

Except for the increased propensity to save in gold, which would be the outcome of the developments resulting from the successes achieved in the reformation movement, the components of the plan required actions to be taken. The model for reformation, with all its components, was aimed at realising the potential of the gold industry. The

main characteristic of the Gold Sector Reform was the interdependence between its various components described above. Development in one of these components would facilitate progress for the others, or a failure in one of the components would affect the overall success. Thus, priorities in the action plan to implement the model had to be established. As noted in the Government's economic programme, the highest priority was given to the establishment of the Istanbul Gold Exchange.

The objective was to open the way for gold based financial instruments, devised mainly by the banks, which would be used and grow parallel to the adaptation of the Turkish investors to the 'paper' gold instruments. Success reached in these two areas would accelerate the preparations for the implementation of the other components of the reform process. The establishment of the Gold Exchange, together with the developments in the gold mining industry, would contribute to the establishment of a gold refinery sector. The developments in the components of the reform model will be discussed in the following sections.

3. IMPLEMENTATION OF THE REFORM

The main characteristic of the gold sector reform model was the interdependence of its various components, where each was an integral part of the process and essential to the model's overall success. The reform model had five main components, namely the Istanbul Gold Exchange (IGE), financial instruments and derivatives, gold refinery, gold jewellery manufacturing industry and gold mining activities. The IGE was given the highest priority in implementation because it would necessarily pave the way for Turkish investors to adapt to 'paper' gold instruments. Success in the operation of the IGE and the introduction of gold backed financial instruments would accelerate preparations to implement the remaining components of the envisaged reform process.

The newly established IGE would require the establishment of a specific management and organisational profile, together with the development of a trading structure designed to compete in international markets. The said trading structure, therefore, needed to consist of a fairly unique and effective trading system which was interlinked with the world's major gold markets. This, in turn, necessitated the installation of a computerised infrastructure in order to optimise the efficiency and speed of transactions, and it also required the implementation of control systems to manage risks insofar as payments were concerned.

Gold backed financial instruments were derived to attract idle and unproductive hoarding (in the form of personal holdings and jewellery) into the system. There was sufficient evidence that the banking sector could, through financial instruments, create a dynamic new market by combining gold holdings with the existing jewellery sector, and that these would gain popular acceptance amongst the Turkish people. The envisaged role of the banks and the instruments that they would launch were described by Government through amendments to existing legislation. This facilitated the introduction of gold deposit accounts and gold savings accounts. The introduction of

the said financial instruments culminated in a projected model for the IGE futures market. The intention of the banks is to eventually convert unproductive personal gold holdings, currently in the hands of the public, into productive assets. This, however, requires increased awareness of the investors through extensive publicity campaigns.

A gold refinery was needed for reasons of competitiveness. Gold traded on the IGE must comply with international quality standards in terms of purity and quality. After financial bottlenecks, poor quality standards are considered to be the second largest problem confronting the Turkish jewellery manufacturing sector. The problem arises from the existence of a number of small unregulated refining operations, besides those operated by the banks themselves. The solution to the problem, and also the challenge, lies in the establishment of a refinery with the capacity of producing semi-final gold products as well as refining scrap gold. This process is not without its inherent problems, but the establishment of such a refinery remains a necessary part of the reform initiative, and the implementation thereof is already in progress.

The gold jewellery manufacturing industry in the region where Turkey is situated dates back several thousand years. This industry, which is based on individual craftsmanship, however, failed to adapt to the mass production demands of modern society. The reason for this is that the legal and fiscal regime was not designed to be conducive to change and actually impeded rather than promoted the development of this sector. The result was that production activities were driven underground and the industry was forced to operate illegally in seriously constrained circumstances. Even under these adverse circumstances, however, the jewellery industry was lucrative. Clearly, this was a naturally competitive industry which needed only to be harnessed and developed efficiently to produce highly beneficial results for the country. This negative environment was changed completely by the liberalisation of the foreign exchange and foreign trade regimes. It became possible to penetrate new markets abroad, and sales to tourists within Turkey increased as well. The overall result was that the jewellery manufacturing industry reconfigured and boomed. With new links to

world markets Turkey rose to become the world's third largest gold jewellery fabr ·ator in carat jewellery after the United States and India in 1990, and it did not require major restructuring of the jewellery industry itself to achieve this. Industrialisation has, however, gained impetus. The industry does, however, still face various financial and location problems as well as constraints relating to taxation and unfair competition. These problems are being addressed within the context of the gold sector reform model in order to maximise the potential of this sector.

A gold mining sector could serve as a valuable source of local raw material supply. Essentially, Turkey is not a gold producing country, and its gold sector sources most of its raw material from outside the country. Increased exploration activity has, however, identified some reserves which are due to come into production. If constraints arising from the use of environment are overcome and these mines do in fact come into production, they will pave the way for the development of a Turkish mining industry. The comparative advantages in further processing already exists, and the demand for the raw material is far in excess of supply within the country. This augers well for the development of a gold mining industry, should necessary mine economic and social factors be in place.

The five main components of the reform model are discussed individually in more detail in the following sections;

3.1 Establishment of the Istanbul Gold Exchange (IGE)

The Government programme in 1993 had stated that the main system elements required for an efficient gold market such as gold exchange, gold refinery and gold banking, were to be formed to implement reform in the gold sector as a final step of the liberalisation of foreign exchange and gold markets in Turkey. The establishment of the IGE required two implementation steps. *The first step* was to amend the Act entitled "Protection of the Value of Turkish Currency" which had been legislated in

1962. This law was amended on 3 March 1993 with the purpose of liberating the capital movements into and out of the country and changing the Turkish Lira into a convertible currency (Demiralp, 1994). The amendment in the Act also sanctioned the possession and free trade of foreign currency in the financial markets.

The effect of the amendment was that the pricing procedure of gold as well as imports and exports of gold was liberated. The price of gold against the Turkish Lira was allowed to float freely instead of being fixed by the Central Bank. At the same time authorised gold dealers were allowed to import and export gold bullion. Furthermore, it was no longer compulsory to repatriate the proceeds of gold bullion exports to Turkey. The regulations concerning temporary imports of gold to be used as raw material in manufacturing export products were simplified (Demiralp, 1994). The amendment of the aforementioned Act, therefore, made the establishment of the Istanbul Gold Exchange practically and legally feasible.

The second step was the publication of the decree titled "General Regulations on the Establishment and Operating Principles of Precious Metals Exchanges" by the Capital Market Board in April 1993. This decree set out the principles for the establishment, organisation, regulatory bodies, members, duties and responsibilities of exchanges to be established in Turkey (Berki, 1994). The publication of this decree led to the establishment of the Founding Committee was in April 1993 which as charged by the Minister in charge of the Under-secretariat of Foreign Trade and Treasury with the preparation of the by-laws of the Istanbul Gold Exchange. The Founding Committee co-ordinated studies on gold based financial products and acted as the executive board until the Statutory Board of the IGE was elected.

The feasibility study of establishing a gold exchange was completed before the decree mentioned above was published. The Founding Committee began working on the physical and legal preparations based on the results of this study pointing out a sufficient volume of currently held, imported, processed and exported gold.

The physical preparations included the identification of a suitable location and the necessary equipment for the exchange building. A historical building in Eminonu –a business centre very near the Grand Bazaar- was chosen. The legal preparations included the drawing up and imposition of necessary regulations. These regulations administered:

- The eligibility requirements for the members of the executive bodies in the exchange,
- The specifications of the gold to be traded in the exchange,
- The trading and clearing procedures,
- The rules arranging the relations and conflicts among members and customers.

The Founding Committee granted membership certificates issued by the Under-Secretariat of Treasury and Foreign Trade to the applicants meeting the requirements. Members were gathered at the exchange to elect the Board. After the election of the Board and the appointment of the Chairman of the Exchange, the Founding Committee's mission had been completed (Berki, 1994).

3.1.1 *The Istanbul Gold Exchange Profile*

A President, a General Secretary and three managers in charge of the Transactions and Clearing, the Data-processing, Automation, Financial, and the Administration Departments administer the IGE. The exchange members are the qualified banks which are located in Turkey, the intermediary institutions for precious metals and The Central Bank which is accepted as the natural member (Kaytaz, 1994). The Central Bank and other institutions dealing with precious metals can only trade the gold they import on the IGE.

The IGE operates under the guarantee and supervision of the State. It is financially

supported by the Under-Secretariat of Treasury as a newly established metal exchange which has an important mission as the major factor of an advance being implemented in the Turkish gold sector. Although it is supported by the State, the IGE is not financially dependent on State subsidy. It has a self-financing structure which generates revenue from the fees charged on transactions.

Prior to the establishment of the IGE, gold was imported only by the Turkish Central Bank, which provided this institution a monopoly to sell gold in the domestic market. The Central Bank was operating on a consignment basis by importing gold, payment of which was made to the seller after it was sold in the domestic market. Its gold transactions were confined to the intermediation of gold purchases by the domestic gold trader.

After the establishment of the exchange, authorisation for gold imports into Turkey passed into the hands of the members of the IGE. Now, every active member of the exchange performs exactly the same way as the Central Bank did before 27 July 1995 when IGE started trading. The IGE has 54 authorised members of which only 15 are actively trading gold (Akman, 1996). As seen in Table 4, of the ten largest institutions in terms of trading volume on the IGE, six are Turkish banks, while the other four are authorised foreign exchange and gold dealers.

Table 4: Ranking of IGE Members in terms of Trading Volume(Kg in August 1996)

Ranking	Member's Name
1	Turkey Ekonomi Bank A.S.
2	Turkey Garanti Bank A.S.
3	Kocbank A.S.
4	Finansbank A.S.
5	Toprakbank A.S.
6	Er-Kar Foreign Exchange and Gold . A.S.*
7	Anadolu Foreign Exchange and Gold A.S.*
8	Birlesik Turk Korfez Bank A.S.
9	Rehber Foreign Exchange and Gold Tic.*
10	Rona Foreign Exchange and Gold Tic.*

* Authorised Foreign Exchange and Gold Dealers.

Source: Istanbul Gold Exchange, 1996

3.1.2 *Trading Structure on the Istanbul Gold Exchange*

3.1.2.1 Trading System

3.1.2.1.1 Trading hours

In the first few days after the IGE started trading there was only one session per day, which was held between 10:00 and 13:00 p.m. The inadequacy of only one trading session per day was soon evident as the first session on the New York Commodity Exchange (COMEX) ended before the session on the IGE started. COMEX was the highest volume trader in gold futures with 7 785 544 contracts transacted on a gold volume of 24 213 tonnes in 1996 (Murray, et al; 1996), and is also the dominant spot gold market in the world. As such it is a determinant of the market perception for gold prices and this led to a decision to increase the total number of trading hours on the IGE from 3 to 4 hours in order to cover the trading hours on COMEX (Aytekin,

1996). At present, two sessions are held on a working day; the first from 11:00 to 13:00 and the second from 14:00 to 16:00.

3.1.2.1.2 Payment mechanisms

On the IGE physical gold market, the parties can exchange their gold and money on the same day, the following day or on the second day. This is slightly different from the procedure followed on international markets where traders can make only spot transactions implying that the amount credited or indebted to the traders account is balanced only on the second day after the deal is struck. It approximates the liquidity and the practicality of the transactions on IGE to those on the informal physical gold market at the Grand Bazaar.

3.1.2.1.3 Pricing system

Trading is carried out by continuous bidding with multiple prices. The prices of struck deals and the stalled purchase or sale commands are accessible by international participants through the real time communication web which gives them the opportunity to purchase and sell gold via the Exchange members (Duyar, 1996). Trade is conducted through the gold trading page on the Reuters on which ask and bid prices are quoted from all over the world. The prices that are negotiated on the exchange are in terms of dollars/ounce as well as TL/gram, which was made possible by the sanctioning of dollar based transactions in the economy .

The automated trading system on the IGE employs the automatic matching method. After the members of the exchange give their commands to the IGE experts who perform the transactions, these commands are entered to the system and are announced to the traders in Turkey and in the world via the REUTERS and TELERATE webs (Aytekin, 1996). For example, after the time when a bid price or a seller's price of US$350.00/ounce is quoted on the system, at the moment the system

recognises an ask price, that is a buyer's price of US$350.00/ounce, it matches the seller and the buyer, strikes the deal and finishes the transaction.

The experts are neither buyers nor sellers and the activity they carry [illegible] brokerage. They enter the quoted prices in the trading system [illegible] inspect the purchases and sales made by the members of the exchange. Experts also oversee the clearing of the transactions. There is no clearing house on the IGE like that of COMEX (Duyar, 1996). As the number of members and transactions on IGE in comparison to those of the COMEX is very low, the experts undertake the duty of a clearing house.

3.1.2.1.4 Clearing practice

The clearing house is a separate agency through which all the gold contracts on exchanges are handled. The clearing house may be owned by banks or exchange members. The clearing house for COMEX, for example, is the Commodity Clearing Association, which is owned by full clearing members of the exchange, being those who are the financially strongest because they must stand to guarantee the contracts.

The agency is responsible for matching up the participating firms on every transaction. This constant monitoring enables it to advise the exchange members at the end of each day what their net margin requirements, which is the collateral to their transactions, are based on the respective long and short positions to make delivery. By presiding over the smooth working of the mechanics of the exchange, the clearing house guarantees every contract, thus giving the exchange its credibility (Green, 1991).

3.1.2.2 World Gold Markets interlinked with the IGE

The trading hours on the IGE also coincide with those on the London Gold Market, Hong Kong Gold and Silver Exchange and Tokyo Commodity Exchange. First prices

quoted on the London Metal Exchange, which does not have a definite starting time, at about 10:00 to 11:00 in the morning, serve as an indicator for the traders on the IGE (Duyar, 1996).

Although the active members of the IGE decide about the market to purchase physical gold, the market on which most of the physical gold purchases are made by the Turkish gold traders is Switzerland (Akman, 1996). Switzerland is both the centre for the physical wholesaling of gold and investment or portfolio holding of gold. There is no tax on gold sales and the marketing of gold is done over bank counters.

Basel, Geneva and Zurich are very important gold trading centres. The three main Swiss banks, Credit Suisse, Swiss Bank Corporation and Union Bank of Switzerland have gold trading desks in these centres, although their main international business is operated in Zurich. All three have their own refineries with accepted London status which enables the trading of gold bullion on the London Gold Market (Green, 1991). Approximately 1 000 tonnes of gold passes through Switzerland annually on its way to other destinations. While Swiss banks are major suppliers to such regional gold markets as Dubai, Hong Kong, Singapore and Tokyo as well as Istanbul, they also have business in their own region. The Swiss watch industry alone requires between 25 to 30 tonnes of gold a year while Italy, the leading jewellery manufacturer in the world, is just across the border.

In the London gold market, the price of gold is "fixed" twice daily at about 10:30 in the morning and 15:00 in the afternoon. The fixing is attended by five bullion banks: Mocatta & Goldsmid, Sharps Pixley, N. M. Rothschild, Samuel Montagu and Mase Westpac. The first fixing took place on 12 September 1919, when the price was agreed at US$20.67 initially as a way of marketing South African gold. The principle to be maintained with regard to the sale of gold in the free market in London is that everyone attending the Gold Fixing is entitled to buy or sell gold on equal terms with everyone else present at the Gold Fixing (Green, 1991). It is also agreed that only one

price shall be quoted and shall represent the price at which all supplies can be absorbed. This principle has been the strength of the fixing because it means that large volumes can be bought or sold at one price. The advantage of a clearly posted price has encouraged mines, central banks, jewellery manufacturers or investors to do their business on the fix because it is undisputed, especially at times when the gold price is volatile. Several local markets also have their own fixing but none enjoys the world-wide benchmark that London holds.

Hong Kong is also a physical gold centre like Istanbul for both tael bars (1 tael=2.1 ounces) and kilobars being re-exported to China, South Korea, Thailand, Taiwan and Vietnam. The Hong Kong Gold and Silver Exchange Society became a significant centre in round-the-clock gold trading after it was liberalised in 1974. Huge volumes traded on the exchange attracted other international bullion banks to establish essentially a parallel market in Loco London during Hong Kong's trading hours (Green, 1991). They took advantage of arbitrage between a Hong Kong price quoted in Hong Kong dollars per tael and a London price in dollars per ounce. The international banks do not trade on the exchange but operate more as wholesalers, dealing in lots of 2 000 – 4 000 ounces at a time. This alliance between local Chinese traders and the international bullion dealers made Hong Kong the pacesetter of the early morning price for gold.

The Tokyo Commodity Exchange (TOCOM) was created on 1 November 1984 by consolidating the Tokyo Gold Exchange, the Tokyo Rubber Exchange and the Tokyo Textile Commodities Exchange. Initially the exchange attracted only local business because of the difficulty of foreign dealers becoming members and relatively high charges compared with COMEX. From 1987 onward, the trade volume exceeded two million contracts annually and the exchange attracted more international participation by offering associate membership for foreign dealers. The exchange had 31 associate precious metal members by 1990. Commissions and margin requirements have also been lowered.

3.1.2.3 IGE Computer System

At the stage of setting up the computer system of the IGE, the Founding Committee's priority was to provide the exchange with the infrastructure to optimise the efficiency and speed of the transactions. The installation of an automation system, which is adaptable to changed trading capacities with the necessary hardware and the software compatible with possible external system connections, was projected. The automation of the IGE project was undertaken in two stages.

3.1.2.3.1 Structure of system

The first stage was the setting up of the systems nucleus which was designed to fulfil the very basic needs of the exchange. There are three main units in the system: the transaction hall, clearing centre and the clearing bank which are electronically linked to each other within the circuit. The clearing bank operated by the experts is also linked to its branches. The clearing centre, besides being the place where gold is stored, gathers all the data related to the transactions.

The second stage of the automation project was the installation of the equipment and software in compliance with the regulations laid down by the Capital Market Board (Kaytaz, 1994). For each member of the exchange there is a database on which the member's gold collateral, current and debt accounts are shown. In the transaction hall, after the forming of the contract, the gold storing limit and the collateral accounts of the contract parties are examined by the Exchange expert. If the expert finds that the limits of the parties are not exceeded, the transaction is recorded and the contract form is registered. Debiting and crediting of the related accounts are done automatically and after the registration of the contract the accounts of the members are updated. The members are allowed to make alterations in their accounts both during the sessions and during the netting of the accounts (Kaytaz, 1994).

The system is organised in a way that all the accounts are upgraded simultaneously. The members who are the parties for the transactions may either wait until the end of the session for the netting of the accounts or may immediately apply to the clearing centre to finalise their transactions. At the end of the sessions the transactions are certified by the netting procedure carried out by the experts. The results obtained at the end of these activities are presented to the exchange members in examination reports. The clearing centre audits, certifies and updates the bank and storage accounts.

3.1.3 *Risk Management*

In the Exchange, the principle of delivery only in exchange for payment or the same day delivery-payment is applied. The exchange members who have not paid for the gold they have purchased are categorised as indebted at the end of the balancing period. Gold subject to this transaction is transferred to the Exchange gold account and is sold in the next session by the IGE as the first transaction. The price difference to the detriment of the seller that can arise from this deferred sale is compensated from the collateral account of the indebted member. Additionally, the IGE determines the rate of daily interest to calculate the accruing interest on the amount unpaid by the indebted and this amount is also deducted from its collateral account. Similarly, if the gold selling parties fail to deliver the amount of gold they sold out of their storage they fall indebted and are subject to the same compensation procedure carried out by the IGE (Kaytaz, 1994).

Summary statistics of these transactions are prepared specifically for the use of the exchange administration, helping the administration to monitor the conduct of exchange members and take measures when necessary. The Exchange also issues a monthly bulletin revealing the necessary statistics to the public (Aytekin, 1996).

3.1.4 *Present Standing*

3.1.4.1 Extent of acceptance of the IGE

A year after IGE began operating, the trading volumes reached was said to be satisfactory for this initial stage. Nevertheless, the exchange coefficient, which indicates the ratio of the total volume of transactions to the total volume of imported gold, was only 1.30 in August 1996. In other words, only 30% of the gold is recirculated through the Exchange (Murray, et al; 1996) which implies that the IGE performs as a mere importer of gold rather than an exchange at present. This is mainly the result of the lack of futures and options market operating under the same roof. Eventually, as these markets are formed and confidence of the investors grow as they become more familiar with its procedures, participants of the Turkish gold market will shift their operations from the Grand Bazaar to the IGE (Duyar, 1996).

3.1.4.2 Trading activity

For the IGE to become a major world gold trading centre it must achieve high trading volumes, which is the prerequisite for investor preference for a market. An exchange with high trade volumes and numerous participants provides investors with the liquidity that enable them to take and liquidate positions easily. A high volume of trade is maintained through active domestic participation and this appeals to the investors from the neighbouring countries.

The value of the transactions completed since the beginning of the year 1996 till August 1996 reached US$ 1,38 billion, while the overall total value of transactions conducted on the IGE amounts to US$ 2,37 billion (IGE Bulletin, August 1996). Table 5 shows the trade statistics for the IGE in the period from the beginning of the year to August 1996. In the eight month period from the beginning of the year to August 1996 a total of 109 514 kg gold was traded. 53% of this amount traded was

transacted in terms of Turkish Liras and the remaining 47% was traded in US Dollars. The total number of transactions amounted to 6 729, implying that in the period from the beginning of the year to 31 August 1996 the average volume of trade per day was 668 kg, whereas the average number of daily transactions was 41. Of the total number of transactions conducted 4 287, (63%) were in Turkish Liras and 2 442 (37%) were in US Dollars. While the number of transactions made in Turkish Liras is slightly higher than the number of transactions made in US dollars, gold volumes in the contracts dealt in Turkish Liras were much higher than those in US dollar denominated contracts.

3.1.4.3 Main source of business

The customers of the 15 active members of the exchange are mainly from the Grand Bazaar. The estimation of the uses of the gold annually imported to Turkey reveals that the majority of the gold imported is channelled to the jewellery manufacturing sector. As of August 1996, the official amount of imported gold was 64.5 tonnes (IGE Bulletin, August 1996) and the amount of gold consumed by jewellers was estimated to be approximately equal to this amount. The total amount of gold estimated by the market members to be consumed in the fabrication of coins, jewellery and other uses of gold is equal to the total amount of gold imported and scrap gold re-entering the cycle (Akman, 1996).

Table 5: Monthly comparisons, 1996

MONTHS	DOLLAR TRANSACTIONS				TL TRANSACTIONS				TOTAL	
	Volume in US$	% Change in Volume (US$)	Volume in Kg	% Change in Volume (Kg)	Volume in TL	% Change in Volume (TL)	Volume in Kg	% Change in Volume (Kg)	Total Volume in Kg	% Change In Total Volume
January	75 736 250		5 860		2 280 750 200 000		2 927		8 787	
February	77 341 895	2.12	5 975	1.96	2 757 691 950 000	20.91	3 272	11.79	9 247	5.24
March	53 424 952	-28.34	4 334	-27.46	7 057 209 200 000	155.91	8 092	147.31	12 426	34.38
April	38 335 004	-30.83	3 026	-30.18	5 259 263 950 000	-25.48	5 699	-29.57	8 725	-29.78
May	57 351 646	49.61	4 550	50.36	8 600 685 900 000	63.53	8 847	55.24	13 397	53.55
June	40 805 420	-28.85	3 296	-27.56	7 434 877 350 000	-13.55	7 491	-15.33	10 787	-19.48
July	136 099 939	233.53	10 995	233.59	10 391 334 700 000	39.76	10 113	35.00	21 108	95.68
August	167 560 668	23.12	13 403	21.90	12 422 726 250 000	19.55	11 634	15.04	25 037	18.61
TOTAL	648 655 774		51 439		56 204 539 500 000		58 075		109 514	

Source: Istanbul Gold Exchange, 1996

3.1.4.4 Successfulness of the IGE

The intention in the foundation of the IGE as the first step of the planned gold sector reform was to legitimise the physical gold market in the Grand Bazaar and to draw the average 150 tonnes of average annual gold import transactions and 300-500 tonnes of trade, into the formal economy. It was designed to decrease the costs of gold trading, improve the rate of transactions and reduce the risks involved by providing Government supervision (Akman, 1996). Except for the fact that it could not take over the role of a physical gold market from the Grand Bazaar, because of the long established logistics of trading gold in the Turkish market, the IGE has fulfilled its duty satisfactorily.

As a physical market, the IGE operates regularly and plays a useful role. It creates a physical gold market by backing and undertaking the payment and delivery operations (Yardimci, 1996). The gold prices are determined in free market conditions and buyers and sellers carry out transactions smoothly at the determined prices. The development of the exchange has further narrowed the price margins between the world gold markets and Turkey and helped to establish fair prices. It also contributed to the establishment of trading standard gold meeting the specifications required by the international gold markets. The next step will be the modification and enhancement of the IGE to contain futures market after its maturation as a physical market together with further developments in the sector and the country's economy (Akman, 1996).

3.2 Gold Backed Financial Instruments and Derivatives

Commercial banks play a major role in attracting idle and unproductive gold holdings, kept in form of jewellery, into the financial system by means of gold backed financial instruments. The conditions in the market, together with the legal formations tailored for the planned reform in the Turkish gold sector, create a suitable environment for

gold banking.

The gold supply and demand circumstances are very promising for the transactions the banks will be carrying out to be successful and widely accepted. On one hand, there are the savers who already hold a significant amount of gold and are inclined to buy gold for their further investments. Research done by the Turkish State Planning Organisation, (a directorate of the Ministry of Finance in charge of planning State investment) indicated that gold has a special place in the investment alternatives, and it is expected that a major part of new investments will be channelled to gold (Ozer, 1993). These findings suggest that the investors will utilise the gold backed investment instruments.

The use of derivatives should ease the financing of gold bullion for use in the jewellery manufacturing sector. Manufacturers operating in the gold sector have difficulty in funding their operations because of the unique technical and economic properties of the metal they are processing and the present organisation of the sector. The banking sector can potentially create a dynamic new market by launching gold transactions and combining these two sections of the economy; the gold holder and the jewellery sector.

3.2.1 *Sanctioning of Gold Based Financial Instruments*

The changes made in the "Protection of the Value of the Turkish Lira Act", on 21 March 1993, and "The General Regulations about the Principles of Establishment and Operation of Precious Metal Exchanges", which were published in the Official Gazette on 3 April 1993, form the legal infrastructure required to permit the banks to undertake gold transactions (Ozer, 1993). The innovations can be summarised as follows:

- The liberalisation of gold imports and exclusion of the banks from the foreign trade

regime restricting gold trade.

- The establishment of Gold Exchange
- The definition of Gold Deposit Accounts

These changes guaranteed the provision of standard gold, specifications of which will be stated below, under suitable circumstances. The banks were allowed to import gold and a sustainable and reliable commercial environment was created. Gold based financial instruments, which could help mobilise a proportion of the idle gold holdings and provide expansion capital for the jewellery sector, would be launched. The definitions of the gold accounts are given in the section below.

3.2.2 *Gold Backed Financial Instruments*

The gold backed instruments can be examined in two categories: physical and financial. *Physical gold instruments* refer to direct investment in gold bullion, coins or jewellery bought and stored in safes. The gold certificate, which is not commonly used in the world markets is used to certify that an amount of physical gold measured in 10-ounce units has been put in store for the investor. These certificates, which can be used as collateral, can also be converted into cash from the current market price of gold at any time. The obvious advantage of the gold certificates is that the investor is not exposed to the risk of fraud, or error in determining the purity of the metal. Problems might emerge for the gold investor, who wants to avoid the burden of storing the gold, only in the case when the company which launches the certificate goes bankrupt (Sonmez, 1994).

Gold certificates have long been issued as a convenient way of confirming an investor's fully paid ownership of gold without going through the actual process of delivery. They were first issued in 1956 under an agreement between the Bank of Nova Scotia, Deutsche Bank, Samuel Montagu and Union Acceptances Ltd. (a subsidiary of Anglo American).

Gold certificates are a particularly useful way of avoiding value added or sales tax, which might be due if physical delivery is accepted. Many German investors, for example, hold certificates of gold held on their behalf by the Luxembourg branches of German banks, precisely to avoid tax. Similarly, in United States, certificates will attest to gold held in authorised depositories, often in Delaware, to avoid sales tax (Green, 1991).

There are also bullion accounts, which are also not well-accepted investment alternatives, bearing 100-ounce gold investment. Another investment vehicle is the "delivery commands" which are widely used in Switzerland and Canada (Sonmez, 1994). These are the receipts taken in exchange for the gold turned in to the inventories. Gold coins are another commonly used investments. They are subject to periodical appreciation in parallel to the gold price.

Storing gold in bullion or jewellery form without recycling its financial value in the market has several disadvantages. The investor receives no periodical income for the capital he invests besides incurring storage costs to avoid the risk of theft. In Turkey, however, because depositing gold in banks or issuing gold certificates were prohibited prior to the change in the related Act in 1993, physical gold, especially in the form of bracelets, was the only physical gold instrument available. The gold trade was confined to direct sales and purchases of gold bullion or jewellery in Grand Bazaar in Istanbul. Naturally, gold accumulated in safes and "under the pillow" reached amounts estimated as high as 8 000 tonnes (Akman, 1994). While this large amount of gold holdings may be considered as a great credit supply potential for the jewellery sector, it may also be considered as a burden as an investment vehicle as the gold has been outperformed by its several alternatives for the last 10 years (Fild, 1997).

Physical gold instruments are not commonly used and the Turkish approach was to utilise *financial instruments*. Mobilising these idle gold holdings and drawing them

into the economy necessitates the cycling of physical gold via paper instruments through the financial sector. The establishment of the IGE acted as a motive and a catalyst for the banking sector to be sanctioned and familiarised to the gold transactions and deposits. The classification and definitions of types of gold instruments as stated in the changed legislation mentioned above are as follows:

3.2.2.1 Instruments to be launched by the Banks

The Central Bank and commercial banks may now open gold accounts for individuals living in Turkey or abroad. These accounts may be used for any purpose and the banks and account holders can freely negotiate the interest rate on them. The legal framework, constructed by the March and April 1993 legislation, equips the banks with the opportunity to alter the instruments parallel to the inclinations of the investor. The specific characteristics of these accounts will vary as banks compete for business (Ozer, 1993). In general, the accounts are classified under gold deposit accounts, gold-indexed deposit accounts and gold saving plans.

3.2.2.1.1 Gold Deposit Accounts

The gold deposit account allows the investor to deposit gold and receive the accruing interest in gold at the end of the term. These accounts may be sight (current) or term accounts. Gold deposit accounts have the advantage over gold holdings in that there is no loss incurred due to the difference between buying and selling rates. They are very similar in nature with foreign exchange accounts applied by the banks. Banks may issue gold credit cards to their customers to facilitate the use of the savings in the accounts (Ozer, 1993).

3.2.2.1.2 Gold-indexed Deposit Accounts

The Gold-indexed Deposit Account enables the investor to deposit the Turkish Lira

equivalent of an amount of gold in the bank. The investor is then able to withdraw the principal amount together with the accrued interest either in gold or in Turkish Lira at the end of the term (Sonmez, 1994). The deposit accounts in Turkish Lira that are indexed to gold are not related to the physical flow of gold. Yet, from the banks' point of view, these accounts bear the same risks as gold deposits and therefore have the same effect on the gold position of the banks. The customer benefits from the increases in the price of gold and receives interest on his deposit.

These accounts offer significant advantages to the investor. Investors do not incur losses arising from the difference between the purchase and sale price. They no longer forgo the value of labour embodied in a piece of gold jewellery. The risk of loss or theft is therefore eliminated while the opportunity to earn interest is retained.

3.2.2.1.3 Gold Saving Plans

In Gold Saving Plans, the investor signs a contract to invest in gold and deposits the amount of money which he will invest in gold for a specified time period in the bank. Within the specified time period, the bank allocates this amount of money regularly for gold purchases and the amount of gold, which is not utilised for gold purchases, is invested in other instruments on behalf of the investor (Ozer, 1993).

It is known that gold prices are fairly volatile in the short term. The spread of gold purchasing within the period, in other words the automatic and regular purchase of gold by following the changing prices and trends in the market, minimises the price risk for the investors arising from the daily fluctuations. Besides, the investor realises greater earnings as the Gold Saving Plans generally manage to buy more gold with a specified amount of money. This is because they follow the gold market closely to capitalise on possible downturns in the gold price. Buying less gold when it is perceived to be overpriced and more when the price is low results in a higher amount of gold acquired. The Gold Saving Plan is a perfectly tailored instrument for the

investor who is inclined to purchase gold at regular intervals, and hold it in the long-term. Besides, the plan enables a wide range of product variations (Ozer, 1993).

These plans were originally and very successfully applied in Japan and thereafter the concept spread rapidly. Many gold saving schemes initiated by banks in places such as New York, Singapore and Tokyo use gold deposit certificates to guarantee investors that gold is held on their behalf (Green, 1991).

3.2.2.1.4 Other Instruments to be launched by the Banks

After the maturation of the gold deposit accounts, the banks will be in a position to develop asset backed instruments using their balances of gold receivable accounts, which occur as a result of the gold credits they extend, as collateral. This will increase the liquidity in the market (Akman, 1996).

Gold investment funds should also be considered. This implies a complete portfolio to be formed by gold investments. Yet, the current regulations only allow gold to be included up to a maximum of 10% of the total value of the portfolio. This ratio will be increased gradually in parallel to the development of the gold market (Sonmez, 1994).

3.2.2.2 Instruments to be launched by the Jewellery Sector

The gold jewellery sector is allowed to issue bonds indexed to gold and other gold-backed securities, but does not exercise this option because of the regulatory capital adequacy requirements. The sector considers gold as working capital. However, if gold is entered to a company's ledger formally as capital; appreciation in Turkish Lira value of the gold, which is a high percentage given the inflation rate in Turkey, is deemed as taxable income.

Therefore, gold belonging to jewellery manufacturers and traders does not appear in

their books and this limits the capacity of the sector to issue bonds. Besides, the practice of keeping gold out of the books results in unrecorded transactions, and loss in tax revenue for the State. If price appreciation were exempted from tax, gold would appear in the companies' accounts. This issue will have to be addressed by changes in tax regulations if the sector is to be able to raise finance via gold-backed bonds (Akman, 1996).

3.2.2.3 Derivatives

The abovementioned change of the legislation in 1993 also sanctioned the instruments which provide for the gold futures contracts to be launched. The Capital Market Board is carrying out the necessary preparations for the development of a futures market on the IGE. It has completed some of the feasibility studies and submitted certain documents to the pertinent Government departments. Since August 1996, progress has been slow due to either a lack of authorisation by the Cabinet Ministers or a need to change in the related legislation. As preparations for cotton futures were also stopped at the time, it can be deduced that the prolonged delay is due to an impending economic factor unique to the gold market (Akman, 1996).

The Government anticipates that legalising trade in physical gold will result in the formation of an efficient market on which gold transactions are undertaken in sufficient volumes to attract potential gold investors. This will, in turn, emphasise the need and stimulate the demand for formal futures gold transactions.

At present, a small volume of futures transactions are being conducted in the Grand Bazaar which has no institutional identity. These informal transactions are very small in volume and are only aimed at meeting the liquidity requirements of the Bazaar jewellers. They are not based on legal contracts but on mutual trust which does not provide any guarantee in terms of payments or the high interest rates applied (Akman, 1996).

Interviewed IGE members comment that it should be anticipated that the newly established futures market will be scrutinised by the market before being fully accepted as the alternative to the informal, traditional market operating in the Grand Bazaar (Aytekin, 1996). The shop owners of the Grand Bazaar will gradually see the efficiency of the IGE futures market and having seen the confidence are likely to participate. From then on, gold sector participants are expected to adopt the futures instruments rapidly.

Nonetheless, in order for gold futures contracts to be arranged there must be a party in the gold sector with large stocks of physical gold. Generally, the institutions, which have the capacity to deal futures contracts, are banks that trade gold or hold major gold mine stocks or gold producers which readily control a certain volume of gold production. As there is no gold production in Turkey, the Turkish gold market can only provide the means for a futures market via gold accumulation in banks. Yet, there is still some time before that level of gold circulation on the market is reached where the credit demand of the jewellers is fully satisfied and the banks' gold holdings reach high levels (Yardimci, 1996).

Markets for risky investments like derivatives can only be successful in thriving economies where the per capita income level is high and the investors are more inclined towards risky instruments for higher returns. In Turkey, a futures gold market will merely be a consequence of the increase in the welfare of the people achieved through economic accomplishments made by converting available resources into productive assets. Only then will all the necessary factors for an efficient futures market be in place such as satisfactory trading volumes and complementing elements such as the speculators, market makers etc.

3.2.2.3.1 Planned Futures Market Model

The concept of futures markets, involving a legally binding contract for the delivery of a specified quantity of a commodity at a specified time in the future at an agreed price originated in Chicago in the 1830's. The intention was to try to even out prices and give farmers, in particular, some way of hedging their crops well before harvest. Gold futures contracts came onto the scene much later. It was not until 31 December 1974 that the first gold futures contract was traded in New York on COMEX as the gold price was fixed before then (Green, 1991).

The intention is for the IGE futures market to be based on the Commodity Exchange Inc. (COMEX) model, which was founded in 1933 (Kaytaz, 1994). The New York Mercantile Exchange (NYMEX) merged with the Commodity Exchange, Inc. (COMEX) in 1994 to become the world's largest physical commodity futures exchange. As the dominant exchange for trading gold, silver and copper futures and options, platinum and palladium futures and energy futures and options, COMEX's liquidity, price transparency and financial integrity make it a benchmark for these markets world-wide (NYMEX, 1995).

The precious metals trade on COMEX exceeds that traded on all other futures exchanges together. It attracts world-wide participation with many traders in Europe, the Middle East and the Far East joining the COMEX sessions. This gives COMEX unique liquidity, which in turn is much of the reason for its suc .ss; it attracts a highly diverse client profile. As a reflection of this situation, the trading hours of the exchange have been progressively taken earlier to suit overseas clients (Green, 1991).

The COMEX gold futures contract is based on 10 ounces of gold. Deliverable gold must be cast in one 100 ounce bar or three 1 kilogram bars by an exchange approved refinery and assayed no less than 995 fineness. Prices are quoted in multiples of

US$0.10 per ounce or US$10 per contract. The last day of trading for a gold futures contract is the third business day of the delivery month. Delivery is made in registered depository receipts issued by exchange approved depositories in New York.

In the COMEX model, main operational capacities are the transaction hall, the clearing centre and the clearing bank. COMEX requires its participants to deposit and maintain a specified minimum amount of funds in their accounts for each open position held. These funds are known as margins and represent a "good-faith deposit" that serves to provide protection against possible losses due to misconduct of members. Margins are required for open futures and short options positions and they are included in the cost of the premium (NYMEX, 1995).

3.2.2.3.2 Advantages of Gold Futures Market

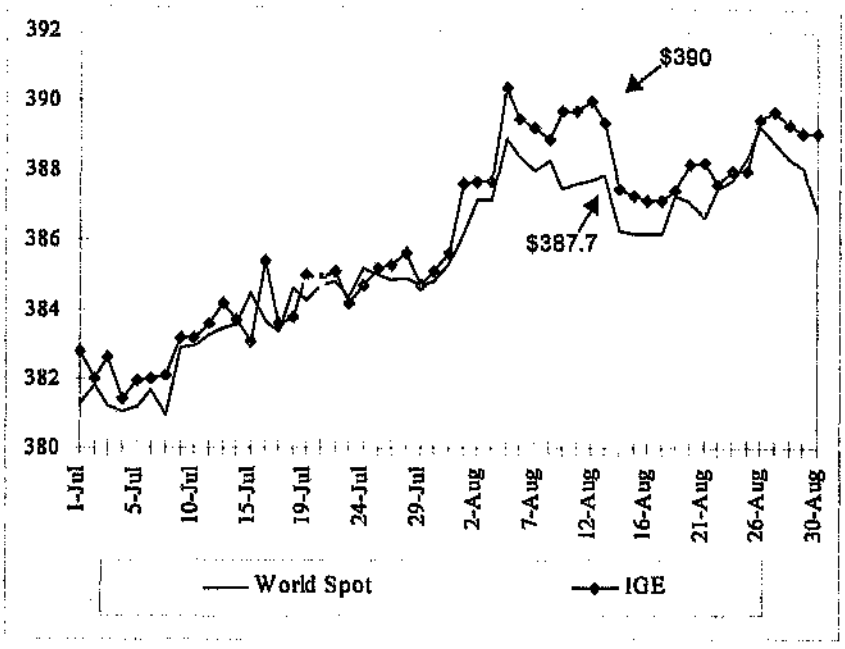
The trading of futures contracts serve two major purposes. One purpose is *hedging* by gold producers or investors against high variations in the gold price. A mining company sells its output forward or buys put options to protect against a price fall. A put option is a contract which gives the buyer the right to sell a fixed amount of gold at a fixed price at a fixed date, and which imposes on the seller of the option the reciprocal obligation to buy such gold on those terms at the request of the seller. On the other hand, a jewellery manufacturer who will need gold in six months buys a futures contact or a call option to hedge against a price rise. A call option is a contact which gives the buyer the right to buy a fixed amount of gold at a fixed price at a fixed date and which imposes on the seller of the option the reciprocal obligation to sell such gold on those terms at the request of the buyer.

Along with the physical gold market operating smoothly and determining spot prices, the futures market is an inseparable part of a gold sector in the regard that the instruments it creates minimise the gold price risk. In Turkey, the combined affect of sudden movements in dollar exchange rate and the short-term volatility of world gold

prices increase the risk associated with of Turkish Lira price of gold. The gold futures market will give the investors in the Turkish gold sector the chance to find a new equilibrium in their profit-risk combinations especially when they undertake long term business projects.

In the Turkish jewellery manufacturing industry, hedging becomes a very important tool in maintaining the cost structure and the competitive edge of an operation during summer months. In Turkey, gold demand surges in the summer months as gold jewellery is the traditional gift for weddings and other ceremonies which mainly take place in summer. This seasonal increase in the gold demand causes the difference between the domestic spot price and the world spot price to widen. Figure 3 displays the fact that the gap between the world spot prices and the IGE price widens during August. The companies, which can create the capacity to engage in hedging activities, can manage their gold purchases at prices below the domestic spot gold price. Maintaining the cost of gold supply close to world prices during these particular months secures the competitiveness of the operation in the export markets, while creating a cost advantage in the domestic market.

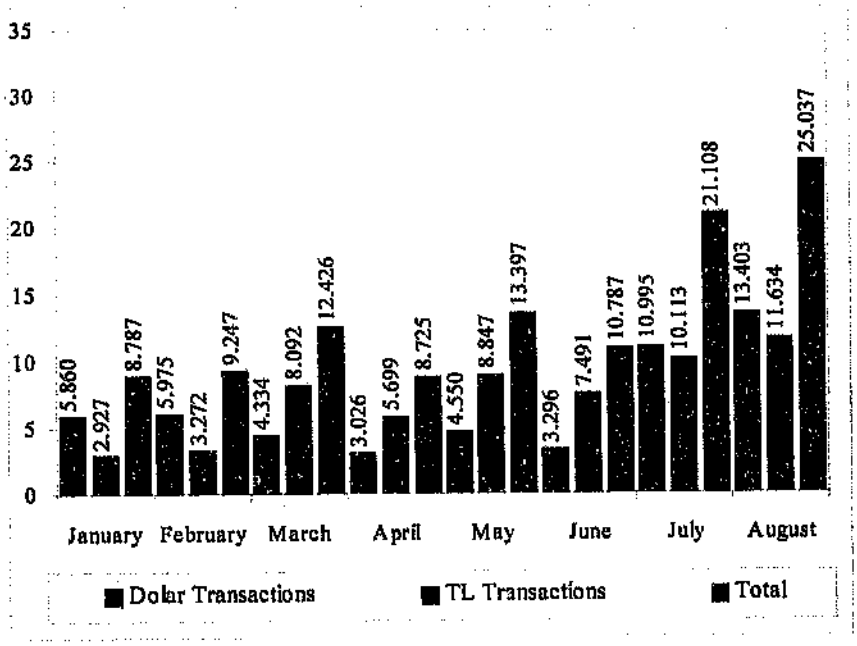
Figure 3: World spot and IGE prices in July-August 1996
(US$)



Source: Istanbul Gold Exchange, IKO, Kitco Inc.

The Turkish jewellery manufacturers started to make use of the gold credits to smooth out this seasonal pattern. The decrease in the percentage of total gold imports in the July-September from 49% in 1995 to 44% in 1996 is an indication that the gold loan facilities are effective to counteract the seasonal increase in the gold demand. However, because the amount of scrap gold entering the market via gold deposits in the banks is still not adequate to supply the whole amount of gold needed for jewellery fabrication, gold credits do not suffice to eliminate the seasonality entirely. The greatest advantage a futures market would bring is to eliminate all the negative effects of the seasonality of the demand in the Turkish gold market. Table 5 and Figure 4 clearly demonstrates that August is the peak month of gold trade on the IGE.

Figure 4: Monthly Comparisons of Dollar and TL Transaction Amounts (Tonnes) (1996)



Source: Istanbul Gold Exchange

The second major activity in futures markets is *speculation* which is defined to be the trading of gold in a way to take the price risk in the expectation of large profits which may arise from unexpected price movements. Gold futures contracts can be bought on a margin of 10 per cent. This gives the opportunity to leverage up to larger amounts, because an initial claim on US$1 million in gold can be achieved for as little as US$100 000. This profit pursuing activity increases the liquidity in the market. Thus, futures markets offer an entirely new concept of gold. Gold becomes something to trade or to make money on rather than being a metal to be used as jewellery or physically hidden away as a guarantee against crisis (Green, 1991).

The flow of the household savings into the speculative futures contracts will also increase the liquidity in the market and reduce the uncertainty in the gold market

assisting the development of gold mining, gold jewellery manufacturing and other fragments of the sector. If, for example, the jewellery producers are in a position to project their replacement costs of their products accurately, they can enter into long-term trade agreements both in the domestic and the foreign markets with confidence.

In derivative instruments, the level of actual deliveries are very low at 1-3% levels. It was estimated that 97% of all precious metals futures transactions are closed prior to expiration (Clark, 1995). A point of concern for the gold market is the effect that this "paper gold" created in the futures gold market may have on the demand for physical gold. As investment in derivatives reduces the risk of holding physical gold, speculative demand for physical gold will be negatively affected.

On the other hand, the cost of holding physical gold in an investment portfolio, in the absence of an alternative instrument to invest in gold, will be eliminated with the introduction of futures contracts. The resultant increase in the portfolio variation, and generation of a revenue flow, will increase the attraction of gold as an investment vehicle. Consequently, the increased demand for the derivatives will stimulate a demand for gold. Whether the final effect of the futures market on physical gold demand will be negative or positive depends on the relative strengths of these two factors (Kaytaz, 1994). In the traditional Turkish gold market, which is dominantly physical gold orientated, an evident negative effect of the futures market on physical demand for gold is only likely to be observed in the very long term.

3.2.3 *Gold Credits*

The launching of gold backed investment instruments initiates the commercial banks to extend gold credits or credits in assets indexed to gold. Banks, which are accumulating gold in the deposit accounts, hold liabilities in terms of gold. In order to balance their gold liability positions and protect them from the price fluctuations, the banks are obliged to place gold credits. This credit supply enables the jewellery

manufacturers to finance their working capital and long-term investments (Akman, 1996). Many bullion dealers outside Turkey have developed special credit programmes for their jewellery fabricating customers. They may even be willing to lend as little as one kilogram of gold or less (Green, 1991).

Gold credits extended to the jewellery manufacturers with low interest rates relative to those applied in the Grand Bazaar eliminate the chronic financial bottleneck faced by the small-scale operations. Indebtedness in terms of Turkish Liras in financing the gold stock exposes the jewellery manufacturing companies both to exchange rate risk which arises out of possible abrupt Turkish Lira/US Dollar rate changes, and price risk arising from the fluctuations of the gold price in the international markets. These risks cause difficulties for the jewellers in meeting their contract obligations and even create the possibility of bankruptcy.

In Italy, which is the foremost manufacturer and exporter of mass-produced carat gold jewellery, the average amount of gold consumed by the jewellery manufacturing industry between 1987-1996 was 384.7 tonnes with a record 461 tonnes in 1992 (Murray, et al; 1997a). Up to 70% of the jewellery is exported, with the United States as the biggest exports destination. The sheer magnitude of regular gold demand in Italy and this country's status as the leading gold manufacturer in the world is attributable to the fact that it was one of the first markets in which the leasing or borrowing of gold by industry was developed. The Italian gold market was the first to realise that borrowing gold for working capital was cheaper, and contained lower risk, than borrowing money to buy gold (Green, 1991).

It was clearly essential that jewellery manufacturers needed a mechanism enabling them to borrow in gold in order for the sector to operate smoothly (Ozer, 1993). At present, this has been provided for, and the operational cycle on the Turkish gold market is therefore complete in this regard. The commercial banks are able to trade on the IGE which provides a confidential and regular commercial environment, collect

scrap gold from holders, and extend the gold they have purchased to the jewellery manufacturers as credits.

3.2.4 *Applications in the Banking Sector*

As stated in the Section 3.2.1, the change in the related legislation made in 1993 provided the legal infrastructure for gold banking, and defined the gold accounts. Although the new legislation did not allow the banks to start operating the gold accounts defined in the legislation, a Communiqué issued on 27 January 1995 rectified this flaw. Nevertheless, after this Communiqué was issued, several requirements were imposed on the conduct of gold deposit accounts. The first one was the obligation to deposit 13% of the accumulated gold at the Central Bank. Furthermore, a requirement to invest 3% of the nominal value of the collected gold in Treasury bonds was imposed. The banks were also obliged to pay 6% of the value of the gold credit extended to the Resource Allocation Support Fund (Yardimci, 1996). In addition, the funds supplied from abroad were subject to a tax-cut.

The aforesaid requirements are tools used by the Central Banks to control the creation of fictitious money. The amount of cash to be deposited by a commercial bank in the Central Bank, which is measured as a certain percentage of bank's credit supply, is a tool to monitor the money supply in an economy. As gold is not a currency and cannot be created fictitiously through lending, a requirement to keep a certain portion of the banks' gold holding in the Central Bank is unnecessary. Imposition of these requirements on gold banking increased the costs of accumulating gold and prohibited the banks from operating gold deposit accounts. These restrictions implied that although gold banking had been legally sanctioned, its actual operations were virtually stalled. Fortunately, it was soon established that the initial aim of mobilising the idle gold holdings of the Turkish people, by transferring them to the jewellery sector via the banking sector, was not achieved because of the imposition of these requirements and they were consequently discarded on 22 July 1996 (Yardimci, 1996).

At present, the banking mechanism which is creating gold deposit accounts and extending gold credits to the jewellery manufacturers is operating regularly. The legal and structural flaws barricading the institutionalisation attempts in the Turkish Gold Sector have been rectified. Supply and demand of gold defines the market under the guarantee and supervision of legitimate institutions. The banking sector is transferring gold funds from investors to jewellery manufacturers and thereby paving the way for expansion and industrialisation in the sector. When anticipated alterations in the tax codes are legislated, the jewellery manufacturers will also be able to launch gold backed movable instruments. This competition emerging from the jewellery industry will stimulate the banks' involvement more effectively in gold transactions and increase the efficiency in the market. Gold's properties as a perfect portfolio diversifier, highly liquid asset and a reliable long-term investment instrument, especially in highly inflationary economic environments, will be realised and appreciated by the banking sector.

3.2.5 *Present Standing*

At present, only three banks, Toprakbank, Garantibank and Isbank, are conducting gold deposit accounts operations. Toprakbank and Garantibank are extending gold credits to jewellery manufacturers while Garantibank and Isbank are conducting gold trade even on Automated Teller Machines under the capacity of investment accounts. While the current number of banks involved in gold deposit accounts does not suffice for a highly competitive banking sector, it is expected that all the banks will start gold transactions in the short term (Akman, 1996).

Toprakbank leads the sector in gold deposit accounts operations. All Toprakbank branches conduct gold transactions controlled from the headquarters near the Grand Bazaar in Istanbul. Toprakbank also applies Gold Savings Plans under Gold Deposit Accounts. The investors deposit a fixed amount of money, which is used to purchase

gold, and the acquired gold is deposited into Gold Deposit Accounts. These procedures can be carried out in terms of Turkish liras, hard foreign currency or effective currency. Toprakbank accepts any type of scrap gold deposited at their branches. The bank's experts establish the purity of the gold and the total pure gold grams are credited to the investor's account. The scrap is then refined in order to be supplied to the jewellers as credits. Sometimes, the scrap gold is not even refined, but lent to the jewellers right away in its used jewellery form. In such cases, jewellers rely on a purity valuation made by bank experts. Another feature is that depositors can withdraw gold in standard bullion form. Acceptance of scrap gold as a deposit by a bank is unprecedented in the world, as banks in all other countries accept only standard bullion (Yardimci, 1996).

Even before 22 July 1995, when the Communiqué abolishing the prohibitive requirements on gold banking was issued and the return on Gold Deposit Accounts was lower, Toprakbank had accumulated 200 kilograms of gold on its deposit accounts. This amount reached 600 kilograms only 45 days after the issue of the Communiqué. This, of course, is a very important indication of investors' awareness of the new investment opportunity and eagerness to utilise their gold savings more efficiently.

Toprakbank projects that the gold accumulated in their gold deposit accounts will amount to 2 tonnes by the end 1996. They plan to achieve a level of 10 tonnes at the end of 1997, the whole of which is planned to finance the jewellery sector. Toprakbank has set its target for their fifth year of gold deposit banking to be 150-200 tonnes per year (Yardimci, 1996). Accomplishment of this plan would mean that in five years' time gold circulation controlled by only one bank will reach a capacity sufficient to substitute the full amount of gold imported, assuming that the annual gold imports of Turkey will remain at the present 150 tonnes level. These plans and figures emphasise the potential and prospects of the banking and jewellery sector in Turkey.

Currently, gold deposit accounts yield an annual interest of 4%. Investors also benefit from the increases in the gold price as the gold deposited in the bank is accounted in terms of pure grams. An advantage is that, investors avoid the cost of storage as well as the risk of theft or loss of their gold by depositing gold in banks. In the informal market in Grand Bazaar the annual interest rate applied to gold credits ranges between 15% and 25%. These transactions are not undertaken under the supervision of a formal authority. It is estimated that 20% of the gold loans extended in this market are written off as bad debt (Yardimci, 1996). On the other hand, banks apply only 9% interest on gold credits. Cheap gold credit is the major reason for the high demand for bank credits from the jewellery sector, and a strong justification for the necessity of the reforms made in the sector.

The banking sector plans that the idle gold holdings in the hands of Turkish people will eventually be converted into productive assets. This projection is based on the fact that in all the developed countries with high levels of per capita income, consumers only hold gold as jewellery and dispose of the gold products they do not use as jewellery (Akman, 1996). The only return that physical gold can yield is the increase in the price of gold. Besides, the impact of an increase in the gold price on the wealth stored in gold jewellery is only partially due to the labour and marketing component embodied in the price of a piece of jewellery. As the Turkish economy will grow and reach the welfare level of more developed countries, people will stop relying on gold hoarding as a long-term investment. In order to increase investors' awareness of the gold market, and the advantages of newly introduced investment vehicles, commercial banks are engaging in extensive advertisement campaigns on the written and visual media.

3.3 Gold Refinery

3.3.1 *Process and Purpose*

3.3.1.1 Measures and Specifications in Gold Refining

Gold is a yellow, smooth, soft and malleable metal which is a good conductor of heat and electricity. Its properties are very suitable for beating and moulding. Ten grams of gold can be shaped into a membrane-thin gold leaf covering an area of 11 m^2 (Sevig, 1995). A 58 kilometre long thin wire can be made from a troy ounce or 31.11 grams of pure gold (Saglam, 1993). The separation and purification of gold from other metals is called refining, as distinct from smelting which is the separation of gold from impurities. Gold being processed by refineries is sourced either from recycled scrap to be purified and upgraded, or, from ore in the final stage of its transformation to bullion bars.

The world's largest refinery is the South African Rand Refinery. This refinery handles the total South African gold output of about 500 tonnes annually. Its refinery section upgrades concentrated ore from mines into bars of 995/1000 and further refines a portion gold of 999.9/1000 purity. On average, this concentrated ore contains 85 per cent gold, 10 per cent silver and 5 per cent base and platinum group metals such as platinum, palladium, vanadium an rhodium (Green, 1991). The smelter section recovers silver and gold bullion from by-product low grade materials. The coin section of the South African Rand Refinery has in the past manufactured gold coins to be struck by the South African Mint to fabricate Krugerrands.

3.3.1.2 Gold in Jewellery Manufacture

Gold has been widely preferred by jewellery artisans. In jewellery manufacturing, gold is usually alloyed with silver, palladium and platinum. Manufacturing semi-final gold

products such as leaves and wires out of gold bullion is a complex process and requires high levels of skill and expertise. In the Turkish gold sector, a standardisation system to oversee gold processing methods and to guarantee the purity level of the gold product does not exist. Transactions are entirely based on trust established by the gold processing workshops.

In commercial use, it is measured in terms of troy ounces and kilograms. One troy ounce is 31.103 grams and one kilogram gold bullion of 999/1000 purity contains 32.119 ounces. The amount of gold in alloys is calculated in terms of 24 units called carats. The measures cited below are used in calculating the pure gold content in a processed gold product:

- Gold bullion: At least 995/1000 purity
- 22 carat gold is 22/24 pure. Gold ratio is 9.16 / 10
- 18 carat gold is 18/24 pure. Gold ratio is 7.5 / 10
- 14 carat gold is 14/24 pure. Gold ratio is 5.83 / 10

3.3.1.3 Gold Bullion held by Central Banks

Gold in central bank holdings at the end of 1993 amounted to some 39 000 tonnes, or 17 times the estimated world production for that year (Williams, 1995), while another 6 000 tonnes is deposited with official institutions such as the International Monetary Fund (IMF) and the European Monetary Co-operation Fund. Not only this is close to one-third of all gold ever mined, but it accounts for between 35 to 50 per cent of all monetary reserves, depending on the gold price (Green, 1991).

Although it has declined in the recent years, gold held by the central banks still serves as collateral for the currency and a vehicle for international payments in every country. As gold holding is usually a parameter in evaluating the wealth of countries, legal protection and supervision of gold products has been regarded as essential to sustain

the confidence in its circulation. Thus, countries have tended to impose regulations to control gold standards (Sevig, 1995). Certain standards have also been set for the gold to be traded on IGE.

3.3.2 *Gold Standard on the Istanbul Gold Exchange*

The IGE is defined as an international exchange where international institutions are accepted as members. Thus, the gold traded on the IGE must comply with the international standards. In Turkey, the specifications of standard gold to be traded on the IGE are determined by the Turkish Government Regulations levied on 3 April 1993 and 16 October 1993. According to the related provisions, the gold, which bears the seal of the refineries whose products are accepted world-wide, can be traded on the IGE. Refineries whose products are eligible for trading on the IGE are listed in Appendix 1. Specifications of the tradable gold bullion are stated below:

- Weight
  Minimum 10.88622 kg. 24 carat (350 Ounces fine gold)
  Maximum 13.37450 kg. 24 carat (430 ounces fine gold)

- Purity
  At least 995/1000 carat

- All bullion should bear a bullion serial number, an identification mark indicating bullion carat grading and the printed seal of one of the approved refineries.

- The surfaces of the bullion must be smooth, without any bulbs, crusting, or signs of bumps. The corners of the bullion must not be sharp in order to avoid possible dents and breakage during transportation.

New regulations may also be levied so that the 1 gr., 5 gr., 10 gr., 50 gr., 100 gr., 250

gr., 500 gr. and 1 kg standard gold bullion produced by the refineries stated in the Appendix 1 will also be accepted by the IGE, after considering the customer demand and adequacy of the storage facilities. According to the carat report of the Minting and Sealing House Administration of Turkey, the gold bullion of at least 900/1000 purity weighing between 5-25 kg will also be traded on the IGE as out-of-standard gold until a refinery is founded in Turkey (Sevig, 1995).

The specifications for standard refinery bullion, which complies with international standards, are different from the standards which have been conventionally applied in the Turkish gold sector (Yardimci, 1994). There will, therefore, be a cost attached in converting conventional bullion to the standards acceptable to IGE. In cases where a 1 kilogram bullion is used by a member of the IGE to meet the obligations of a contract entered, the cost of converting it into the acceptable bullion will be demanded by the clearing centre, from the buyer, in addition to the gold price.

3.3.3 *Current Situation and Prospects of Refining Activities*

A survey conducted in 1991 revealed "the lack of standards, carat problems and related unfair practices" as the second most important problem of the jewellery manufacturing sector after financial bottlenecks. It is commonly agreed that it will eventually be imperative to establish a gold refinery in Turkey. Various reasons for the essence of gold refinery are;

- to increase confidence and interest in gold backed assets
- to generate a supply of standard gold to the IGE through refining scrap gold into standard bullion,
- to manufacture intermediary, semi-processed gold products for jewellery manufacturers.

3.3.3.1 Existing Scrap Refining Practice

At present there are 5 small scale gold refining operations in the Grand Bazaar, apart from the refining activities integrated to large gold jewellery manufacturing plants (Oztepe, 1996). Banks also operate small refineries in their own capacity to refine scrap gold. However, as the potential for gold credits in the jewellery sector is huge, the banks are not in urgent need for a refinery with a higher capacity, because all the gold they collect in their accounts is immediately transferred to jewellers. They extend gold credits to the jewellers in scrap form. This increases the liquidity of their gold holdings. It also decreases working costs and minimises the banks' need for refining facilities.

When the jewellery sector demand for gold credits is saturated, banks will not be able to place the entire amount of gold accumulated in the gold deposit accounts as credits. The excess scrap gold will have to be refined into standard bullion and traded on the IGE. Only then will the banking sector require a gold refinery approved by the IGE, as the gold refining workshops operated by the banks will not have the capacity to produce standard bullion (Yardimci, 1996).

3.3.3.2 Need for Semi-Manufactured Products

The activities carried out by a refinery cannot be confined to refining scrap gold. At present, there is not a single operation in the Turkish gold sector supplying the jewellery manufacturing sector with standard semi-processed gold products like gold leaves or wires. Thus, all the small scale jewellery manufacturers must engage in a rather inefficient vertical integration in their production, where they have to supply gold in bullion form as their raw material, and process it into the final jewellery product. Even a jewellery artist who designs, draws and manufactures unique jewellery sets, working in his own workshop, must melt the amount of gold he needs

out of the pure bulk, mix the alloy and mould it into wires or leaves to be shaped in jewellery (Akman, 1996).

The aforementioned lack of specialisation in certain stages of jewellery production hinders efficiency. The disadvantage that results can be overcome . the establishment of a refinery which will manufacture standard leaves and wires of gold in various colours and hardnesses. These semi-processed products would cost the jewellers more than those manufactured in their own workshops, but, they would enable jewellers to minimise their failure rate, and deficiencies in final products that arise from the shortcomings of the material used. A superior intermed'ate gold product coming from a specialised producer will minimise the risk of dents in jewellery and avoid corrosion or cavities in moulding (Akman, 1996). The jeweller will be able to concentrate on improving the design and finished quality of his jewellery products.

A gold refinery supplying semi-final gold products manufactured by melting bullion or by purifying scrap gold will fill in a huge gap in the sector. A large-scale well-equipped refinery will maximise the heavy metal yield extracted from scrap gold which will reduce the costs of purification and production of intermediary gold products.

3.3.3.3 Opportunity to further refine imported ore

A refinery to be set up will also be utilised to smelt the gold ore. The gold mines in Middle East and Turkmen CIS countries might also transfer their ore milled to Turkey to be refined. Uzbekistan, with 65 tonnes of average annual gold mine production since 1992, leads this group ot countries (Murray, et al; 1996). Kazakhstan follows Uzbekistan with an average of 15-20 tonnes of alluvial gold production (Green, 1993).

3.3.3.4 Indicated approach

It may be concluded that there are three activities which a refinery can carry out:

- Refining scrap gold
- Manufacturing semi-processed gold products
- Concentrating gold ore

Each activity might be conducted in different plants, or they may be integrated in one capacity. The establishment of refinery plants will be the result of lengthy feasibility studies (Akman, 1996).

3.3.4 *Attempts at Establishing a Gold Refinery*

3.3.4.1 Justification for a Refinery Establishment

The establishment of a gold refinery is expected to be the outcome of the increased activity in the banking sector and the structural development in the jewellery manufacturing sector. The estimated amount of scrap gold returning to the system is said to be as much as that of the gold bullion imported. There is an average annual circulation of 50 tonnes of scrap gold in the market and the liquidation of a portion of gold holdings is expected to increase this amount. Some 47 tonnes of scrap gold entered the gold market in 1995, and the amount of scrap gold recycled during 1996 was 53 tonnes (Murray, et al; 1996;1997). Scrap reached a level of 70 tonnes in 1994, when an economic crisis caused major liquidation of gold assets. These figures and estimates indicate the potential for formal development, warranting the establishment of a refinery.

3.3.4.2 Action taken and legal considerations

The Capital Market Board projected a co-ordinated reform plan in the sector, comprising the establishment of an exchange, refinery, and gold banking sector. The

legal actions related to the establishment of the refinery by the IGE have been completed. The IGE has contacted established gold refinery firms, mainly in South America, Europe and Australia, to consult with regarding the functional specifications of a refinery, and has negotiated with foreign companies experienced in refinery founding for about two years. However, the construction of the refinery infrastructure has not yet been commenced.

With regard to the legal aspects of establishing a refinery, it has been found that special legislation or authorisation is not required. It can be instituted as a public liability corporation under the existing Commercial Code. The inclusion of foreign capital in its finance structure is not legally prohibited. After a refinery is established and comes to the stage of selling its first product on the IGE, it will apply to Treasury for approval for the bullion it produces. If its products meet quality standards for supply to the market, they will be granted the seal of carating/sealing (Yardimci, 1996).

3.3.4.3 Considerations for Implementation

The establishment of a refinery may be supported by the Government, or entrepreneurs from within the gold sector might set up a refining plant. Apart from the attempts by the IGE to found a refinery, private companies in the gold market are progressing with their efforts to establish a refinery and they have already completed feasibility studies. A further option is the expansion of one of the small scale refining operations (Oztepe, 1996).

The refinery, as planned at this stage, will not only recycle the scrap gold in Turkey, but will also have the capacity to smelt the milled gold ore from the gold mines both from Turkey and the Turkmen Republics of Central Asia. Capacity for 100 metric tonnes per annum is planned. The capital cost of the refinery will depend both on available technology, and the methods employed. Only after the proposed refining

3.4 Jewellery Manufacturing Industry

3.4.1 *Historical Background*

The earliest gold jewellery production dates back to the Sumer civilisation which flourished around 3000 B.C. in southern Iraq between the Tigris and Euphrates rivers, which rivers have their source in Turkey today. From the very first discovery of gold along the rivers of Africa and Asia, the ease with which the metal could be proce inspired craftsmen to shape it into jewellery for adornment. Its malleability and flexibility meant that it could be hammered into thin translucent leaves or shaped into thin wires to make gold chains. Its incorruptibility, which also makes the dating of early gold jewellery difficult, made it a symbol of permanence, wealth and power.

During the twentieth century the market for gold jewellery, which had previously been a luxury, widened significantly. As gold was gradually phased out as a monetary metal, an alternative use had to be created (Green, 1991). Introduction of technology made a major contribution to the promotion of jewellery consumption by decreasing the cost of the labour component in jewellery. Italy became the leading country which integrated technology and mass production to gold jewellery manufacturing, by the establishment of large factories with hundreds of chain machines. Today, jewellery is a mass market product and consumes most of the newly mined gold. Between 1970 and 1990, about 65 per cent of all the gold entering the world gold market went into jewellery production. In peak years such as 1989, 96 per cent of all newly mined gold was used in making jewellery products (Green, 1991). The increased availability of gold jewellery which resulted from the introduction of mass production gave gold consumption a new impetus. Italy's carat jewellery fabrication in 1996, including the use of scrap, was 439 tonnes out of a total 2 806 tonnes of world gold fabrication in carat jewellery (Murray; et al; 1997b). The gold mining industry spends close to US$ 50 million annually through the World Gold Council to promote gold jewellery in the

world (Green, 1991).

3.4.2 *The Effects of the Liberalisation Process on the Turkish Jewellery Manufacturing Industry*

3.4.2.1 Results of Historical Stagnation

The history of making jewellery in Anatolia, where 85% of the Turkish land lies, dates back several thousand years. Electrum, which is a very pale yellow natural alloy of gold with 20-50 per cent silver, was found in the rivers of Anatolia and was used by the Egyptians as early as 5 000 B.C. for gold artefacts (Green, 1991). The earliest examples of enamelling, which is the technique of bonding enamel with gold, was found in the Minoan and Mycenean civilisation which had developed in the Western Anatolia and the Mediterranean islands.

However, the jewellery manufacturing industry in Turkey could not adjust to the changes made in the industry by the introduction of mass production and technology. Jewellery making stayed as a conventional business of craftsmanship. Before 1980, the jewellery manufacturing sector operated in a rather disorganised and clumsy way with no links to the formal economy. Although the participants in the sector were secretive and mainly operated "underground", they still controlled a huge amount of gold trade volume and capital accumulation. The most important reason for the disoriented condition of the jewellery sector was the foreign exchange regime before liberalisation.

Individuals were not allowed to hold foreign currency but the sector had to make payments in foreign currency to purchase gold at prices much above international levels. The importing of gold as contraband increased costs for the gold processing entrepreneurs, and the competitiveness in downstream gold products was consequently weakened. Precious stones were also smuggled since import through the

normal channels was prohibited. Gold dealers acted as illegal exchange bureaus and the whole sector operated illegally. Under these circumstances, technological development, product design and marketing techniques were neglected (Ertuna, 1994b).

3.4.2.2 Developments after the Liberalisation

3.4.2.2.1 Increase in Exports

Liberalisation of the exchange rate and foreign trade regime changed this environment completely. In July 1988, an Exchange Bureau was established, and in August 1989 Authorised Institutions for the export of gold jewellery were established. The gold sector was consequently motivated to legitimise its operations, and integrate with the formal economy. This initiative was, however, initially met with suspicion and distrust by the jewellery sector. Few applied to become Export Authorised Institutions, and only five operated successfully. Others chose to retain their unaudited business status and exported through Export Authorised Institutions set up by other manufacturers (Ertuna, 1994a). One of the deterrents was that, gold jewellery manufacturers had to be secured against the price and exchange risk involved in supplying their raw material. As already mentioned, short or long positions held in gold in terms of Turkish Lira or foreign exchange would trigger financial crises and even bankruptcies in times of abrupt fluctuations in either the gold price or exchange rates.

The gold sector was aware of the need for gold borrowing. In 1990, when the legal formations for the sanctioning of gold credits placed by banks had not yet been completed, jewellery exporters developed schemes to benefit from gold leasing opportunities available in Europe, and some opened branches in Europe. The gold purchased in Europe was imported to Turkey under the Temporary Import Regime and subsequently re-exported as jewellery or bullion (Ertuna, 1994a).

Under this structure as exports through Export Authorised Institutions increased, contact with the formal administrative institutions increased, and the jewellery sector identified the need for the expertise of professionals capable of handling the problematic transition to legitimate business operations. These people were transferred from other sectors and brought with them a different outlook and new concepts of manufacturing and marketing jewellery in the export markets.

The first export market to be penetrated was the Middle East which provided easy entry because of the low quality and design requirements. Exporting jewellery to the Middle East provided a useful training experience. Exporters learned how to trade with foreigners, how to adopt marketing strategies and how to deal with Government regulations, as well as how to keep proper accounts. The Middle East market soon proved to be too small and new markets were sought for. The jewellery sector took up the challenge of carving a niche in Western markets which required higher quality and a more serious business approach (Ertuna, 1994a). The access to Western markets underlined the importance of quality and design. With the financial and technical assistance provided by the World Gold Council, the investment in new technology, and effort with regard to improved product design, increased.

3.4.2.2.2 Local Tourism Market

Another dynamic created by the liberalisation of the gold and foreign exchange markets which stimulated development in the jewellery manufacturing sector, was the increase in the tourist purchases of gold jewellery. Before liberalisation, it was difficult for tourists to purchase gold jewellery products in Turkey. They had to declare the amount of foreign currency they brought into the country when they entered the country. Because spending foreign exchange was prohibited, tourists exiting Turkey had to show evidence of exchange for the Turkish Liras they spent to purchase gold jewellery. Some tourists tried to benefit from the unofficial exchange

rates by declaring less money than they actually had.

After the abolition of foreign exchange restrictions, the number of tourists visiting Turkey increased. As a result of regularised market exchange rates and, the sanction to spend foreign currency, tourists began to spend more on gold jewellery during the course of their stay. Low labour costs and VAT rates (imposed on labour costs only) made gold jewellery prices competitive. Together with the improvement in the jewellery quality and design, sales to tourists increased significantly.

3.4.2.3 Overall Positive Results of the Liberalisation

Parallel to developments in tourism and increased exports, the jewellery industry finally established links to world markets, enhanced its capacity to produce quality goods, and started meeting the taste of purchasers in both the domestic and foreign markets. In 1990, Turkey was the third largest fabricator of carat jewellery, including the use of scrap gold, after the United States and India with 130 tonnes of production (Murray, et al; 1996).

Figure 5 and Table 6 illustrate the increase in jewellery exports after the liberalisation of the gold market. Figures stated in the Table 6 represent direct exports of jewellery through the Turkish Mint. The significant increase achieved in 1989 indicates an upward trend in formal gold jewellery exports initiated by the establishment of Export Authorised Institutions. The amounts exported do not include sales to tourists in Turkey which are estimated to be around 30% of total production.

Table 6: Gold Jewellery Exports through the Mint

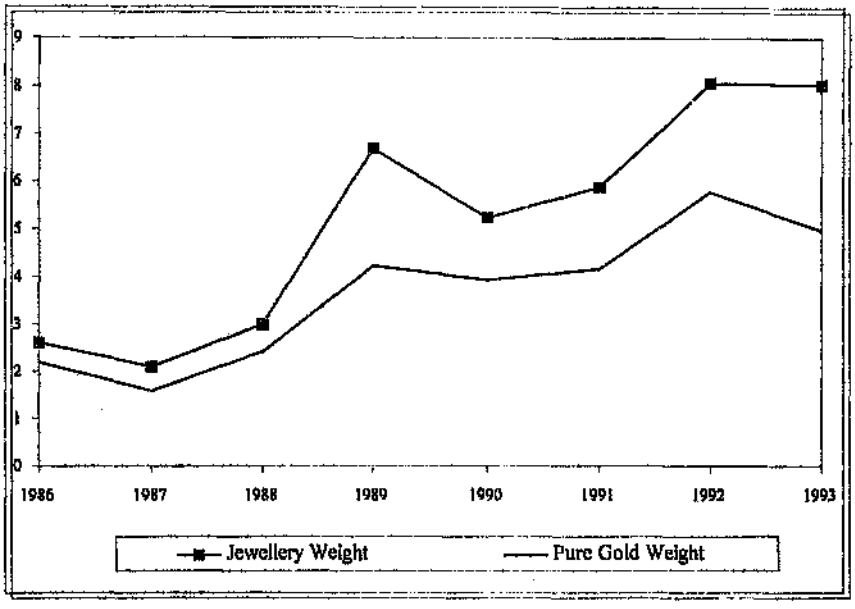
Year	Net Jewellery Mass (Kg's)	Net Pure Gold Mass (Kg's)	Net Jewellery Mass to Net Pure Gold Mass Ratio
1986	2,618	2,193	1,194
1987	2,102	1,587	1,324
1988	3,012	2,425	1,242
1989	6,675	4,215	1,584
1990	5,22	3,931	1,328
1991	5,876	4,154	1,414
1992	8,07	5,784	1,395
1993	8,046	4,979	1,616

Source: Turkish Mint, 1993

The second column of the Table 6 lists the mass of jewellery exported in years from 1986 to 1993, while the third column indicates the mass of pure gold content in the mass of jewellery exported during the same years. The widened gap between jewellery mass and pure gold mass in 1989 displayed in Figure 5 points out the trend towards exports of low carat jewellery with higher added values. The ratio of jewellery mass to the pure gold content in jewellery increased to 1.616 in 1993 from a ratio of 1.194 in 1986 (Table 6) illustrating the same phenomenon.

As a result of liberalisation, the jewellery manufacturing industry reconfigured and boomed. This was because the liberalisation of markets harnessed a naturally competitive informal sector and strengthened it by giving it access to formal structures. It was bound to happen given the comparative advantage, offered by the Market Area Locational Interdependence, that is inherent in the Turkish gold jewellery sector.

Figure 5: Gold Jewellery Exports through the Turkish Mint (Tonnes)



Source: Turkish Mint, 1993

Location theory suggests that location of a production plant at a particular site is dictated by two elements: (a) the production cost advantages at a particular site, and (b) the concept of market area locational interdependence, which refers to the existence of a consumer market at a specific location which attracts production facilities (Robinson; Von Below, 1990). However, the concept of market area locational interdependence tends to strongly favour location close to a consuming market. Production cost advantages, which may or may not exist at a location close to the mineral source, may still not be sufficient to bias the location decision in favour of the mineral producing country.

This theory applies to a great extent to the comparison between gold sectors in South Africa and in Turkey. The existence of a strong Turkish domestic gold market

initiated the establishment of a robust gold jewellery manufacturing sector. In Turkey, where there is no gold production, dynamic gold trade that has been going on for centuries warranted the foundation of a gold exchange. The amount of gold fabrication in carat jewellery excluding the use of scrap reached 91.7 tonnes in 1996 (Murray, et al; 1997a). On the other hand, in South Africa, which is the world's leading gold producer with 494 tonnes of gold produced in 1996, the amount of jewellery manufactured excluding the use of scrap gold was only 4.6 tonnes in the same year (Murray, et al; 1997a). Thus, the Turkish jewellery manufacturing industry enjoys the advantage of having a vivid domestic gold market, and being close to the prominent jewellery consuming countries in the Middle East.

3.4.3 *Present Situation of the Jewellery Manufacturing Sector*

As cited above, the liberalisation in the Turkish gold and foreign exchange markets initiated a change of face in the gold sector and revealed the resource and market potential. The liberalisation programme transformed the gold jewellery sector into an industry interacting with world gold markets, which is capable of producing quality products meeting the design and taste requirements of domestic and foreign customers.

Turkey now exports gold jewellery to more than 30 countries in America, Europe, the Middle East, Asia and Australia. In the earlier years of the liberalisation programme the majority of Turkish gold exports were channelled to Middle East countries. By the mid-1980's when Saudi Arabia developed its gold jewellery sector under high tariff protection, jewellery sales to Middle East declined despite the exports by production units set up by United Arab Emirates based companies operating in Turkey (Ertuna, 1993).

At present, the Middle East market as a gold exports destination for Turkish jewellery manufacturers has been subordinate to European, American and Japanese markets

which offered more lucrative and sustainable business opportunities. This improvement in jewellery exports was mainly the outcome of the positive effects of the reformation implemented in the gold sector after 1993. The official jewellery exports in 1996 were estimated to increase to 15 tonnes from 8 tonnes achieved in 1993 (Table 6). The reason for the high rate of increase in annual exports is that the current level of 15 tonnes is too low for the industry's capacity, capital and labour potential, and the purchasing power of the consumers on the markets which gold jewellers have readily penetrated (Akman, 1996).

Italy, which is the leading gold jewellery manufacturing country in the world, exported 336 tones of gold jewellery through official and unrecorded exports in 1996. Italian design ability, expertise in improving and maintaining the machines, and low labour costs, resulted in Italy producing more machine-made chain than any other country in the world. This success level in the Italian jewellery industry was achieved mainly through the availability of gold credits, which provided the financial structure to develop large scale jewellery manufacturing plants. As a result of the reform movements, the Turkish jewellery industry is now on the same route towards industrialisation.

3.4.3.1 Structure of the Jewellery Manufacturing Industry

Despite the reforms in the gold sector, the Turkish jewellery industry is still for the most part an informal sector, operating according to long established customary patterns. This situation is largely due to the insufficient capacity of Government agencies, and flaws in the tax regulations. As there are no annual reports published by any of the jewellery operations, whether large or small in scale, almost all the information about the sector is based on the estimations of the people who are most experienced in the field. There are only three reliable figures explaining the gold movements within the sector: the amount of gold imported, the official exports of the Turkish Mint and the amount of coins printed by the Turkish Mint. The rest of the

information obtained is based on estimates by the sector members which might prove extremely inconsistent (Akman, 1996).

Ten prominent jewellery companies dominate a 20% market share and it is impossible to know the exact number of small firms composing the remaining 80% (Akman, 1996). It is even impossible to know the exact number of gold jewellery outlets. In order to create a database of the gold dealers in Turkey, the Istanbul branch of the World Gold Council has been gathering data in the jewellery sector for the last five years. However, this research has not been successful in finding the total and exact numbers and volumes of the various types of operations in the sector.

The most important reason for this is the business owners' reluctance to reveal information about their operations. The majority of the gold manufacturing or trading operations do not have tax registration. Apprehensive of legal charges they may face, they could be very hostile to researchers who would come to note details of their establishment and inquire about their business. Apart from the World Gold Council, which is a multinational and impartial establishment, the jewellers' associations or chambers are also unable to obtain information about the gold enterprises.

Another reason for not being able to number the active firms in the sector is that formal closure of dormant firms is not evident. Today, there are 35 000 to 40 000 firms, registered at the Ministry of Finance, that are supposed to be operating in the gold sector, but it is impossible to determine how many of these are still active. Some firms may have closed as long as 30 years ago, but may still be registered as active operations. The reason for this is that firms which officially close their operations and cancel their registration with the Ministry, have to pay the tax accruing from the appreciation of the value of gold entered as working capital in the firm's accounts for as many as 30 years (Akman, 1996). Remembering that the 1968 price of gold was US$35 per ounce, there is approximately a tenfold appreciation in dollar terms of any amount of gold outstanding in accounts on which tax must be paid. This means that a

properly created and updated database is extremely difficult to establish, because of this strong disincentive to close an operation formally.

The World Gold Council database, in its incomplete form, is the best available at present. It contains titles and addresses of about 5 000 retailer stores and 2 000 manufacturers. However, there is no further information about the business operations of the 5 000 retailer stores and 2 000 manufacturers on the database. Questions relating, *inter alia*, to the portion of the listed 35 000 - 40 000 gold sector operations which is active or why the World Gold Council has found only 5 000 retailers, remain unanswered. In order to find out about domestic trade or production volumes of individual firms, one can only make estimations proportioning the domestic and foreign sales of firms. Because all exports are properly accounted for and official, where the proportion of a firm's exports to production is known, a total production figure for the operation can be estimated (Akman, 1996).

The World Gold Council also attempts to obtain estimates for the production volumes of the entire sector from the participants of the sector. However, the figures supplied by different manufacturers and refiners do not agree. For example, a jewellery manufacturer bases his estimation on the assumption that all the other operations use the same amount of recycled scrap gold as his operation, and multiplies the amount recycled by his company by the number of operating firms to reach a total for the sector. On the other hand, the refiners which process the scrap gold and supply to the manufacturers may declare half this amount or even less to have been refined. Therefore, information obtained from the business owners about the Turkish gold market has to be interpreted carefully, as even the most experienced members of the market may commit significant errors in their estimates (Akman, 1996).

3.4.4 *Industrialisation in the Jewellery Manufacturing Sector*

The jewellery sector has gained impetus in industrialisation, largely due to changes in

the related codes and developments in the banking sector which enabled the jewellers to receive gold loans. Availability of low-cost working and expansion capital will help the Turkish gold jewellery industry to reach the production and export levels of leading Turkish export industries such as textiles and glass industries.

The unemployed portion of the Turkish population, and expertise accumulated through centuries, comprise the essential labour component of expansion in the jewellery sector. The physical problems faced especially by the small and medium scale jewellery manufacturers who find themselves squeezed in narrow shops and alleys of the Grand Bazaar will be solved when the project of a Jeweller's City, which was envisaged by the Istanbul Chamber of Jewellers, is materialised. As it is, the sector is t its final stage of advance in terms of the quality, design and distribution.

The industrialisation in the Turkish gold jewellery manufacturing sector has been completed to a certain extent. The largest two modern gold jewellery factories in Europe are in Istanbul. These are the plants owned by ARPAS & ASGOLD, and ATASAY. These two companies are considered to be among the largest in the world (Akman, 1996). They export jewellery to the American and Japanese markets, and even to the Italian market where 446 tonnes of jewellery was manufactured in 1995. (Murray, et al; 1996).

3.4.4.1 Small and Medium Scale Jewellery Manufacturers

In the jewellery manufacturing sector, small and medium scale operations began to grow gradually into capacities which are sufficient to compete in the export markets. There is an identified growth path that the small scale jewellery manufacturers follow: The jeweller leaves his premises in the Grand Bazaar and relocates to a plant after finding that space and organisatio . confines him to a certain level of production and quality. The new plant should have a minimum of one acre of covered space. The required space enlarges depending on the projected expansion, and the number of

people the jeweller plans to employ. After relocation from the Grand Bazaar comes the phase of supplying the machinery, training the employees and starting production. At first, the jeweller aims at the domestic market to test his products, and sets up large retailer stores in Turkey which may target either the domestic market or tourist market or both of them (Akman, 1996).

Jewellers also differentiate their products by sculpturing authentic designs. Employing capital and labour resources concentrating on jewellery designing helps them to develop their own style of jewellery and emerge as a brand. The attempt to become a brand in gold jewellery is usually accompanied by advertisements and the employment of various marketing strategies. After succeeding in the domestic market and establishing the company name as a brand, campaigns to penetrate the export markets are launched. The first step of the plan to penetrate export markets in Europe, America and Japan, is to set up branches in these regions and start negotiating for sales contracts.

Mergers among small workshops are also becoming a widespread phenomenon among small workshops in the sector. Jewellers have realised that they can produce more efficiently by consolidating their operations. The firms in the sector are growing and the number of people employed by the sector is increasing. For example, 3 entrepreneurs may discontinue their operation of refining and jewellery workshops employing 3 people each, and co-operate to set up an integrated jewellery factory employing 15 people.

One other reason for the small scale jewellery manufacturing operations to amalgamate their businesses, is that the small workshops are financially dependent on the jewellery wholesalers. They allocate 1-3 kilograms of gold as working capital financed by the wholesalers, which confines the jeweller to the domestic market and to a business cycle of constant volume. Only after reaching a higher level of capital can the jewellers sustain a fashionable product line which can compete in export

3.4.5 *Problems of the Jewellery Manufacturing Sector*

Problems faced by the jewellers can be examined under three main headings:

3.4.5.1 Financial Problems

Although the banks' commencement of gold deposit accounts and supplying the sector with gold credits was a certain remedy for the sector's financial problem, the gold backed instruments market is still not operating perfectly. For the sector to develop further, gold backed liability instruments must be implemented. The Capital Market Act sanctions the development of movable assets backed by the assets of the jewellery manufacturing company. The companies operating in the gold sector can issue their own bonds showing their gold stocks as collateral.

However, this option to raise funds has never been utilised by the sector. The reason for this is that the appreciation in the value of gold due to inflation is being taxed by the State. This flaw in the tax system is a major obstacle on the way to the institutionalisation of the Turkish gold sector, because it creates a strong motive for the jewellers not to declare the correct amount of gold they employ in their balance sheets. The jewellery manufacturers are obliged to pay tax on the difference between the value of gold on the dates of entry to and exit from the books, taking it as earned profit, although gold as raw material does not yield any profit to the company (Akman, 1996).

For a jewellery manufacturer, the continuous variation in the price of gold does not mean a profit or a loss because gold is the manufacturer's working capital that has to be replaced as it is used up as raw material regardless of the price changes it incurs. If a jewellery manufacturer has 100 kilograms of gold, he processes this raw material and profits from the value he adds onto the gold. For his business to be sustained he

must be able to replace the 100 kilograms of gold he has sold as jewellery. If there is any appreciation in the price of the jewellery he produces due to an increase in the gold price, this speculative profit is immediately counteracted when he purchases high price gold to replace his working capital.

If we assume, based on the low volatility the gold price has sustained over the last years, that the dollar gold price is constant over the year and the Turkish lira rate against the dollar keeps up with the approximate 85% annual inflation in the country, taxing the difference in Turkish lira value of the same quantity of gold, used as capital between the beginning and end of the year, tends to exhaust the company's gold capital in a number of years depending on the tax rate. A jeweller actually incurs shrinkage in his capital due to capital taxation.

To avoid this kind of depletion in their working capital, the majority of the jewellery manufacturing companies do not have transparent financial statements. They have no documentation as to what their real production or sales are. This is a problem that remains to be solved as the State cannot collect VAT or the other accruing taxes because there is no available tax base in the sector. The genuinely accruing tax payments of the sector in fact are an enormous source of potential income for the State, and can be generated only when this flaw in taxation of the gold sector is rectified.

On the other hand, there are large scale jewellery exporting companies which are in continuous need of funding. They have to prove their large production volume and trade and become audible in order to be granted export or other credits. Thus, they have to produce transparent financial statements that are structured in a way that exempts the company from the tax payable due to the appreciation in the value of their gold stock.

In this regard, the banking sector provides the jewellery manufacturing companies

with the means to create their own solution for this problem. If a jewellery manufacturing company has 100 kilograms gold being processed in its plants, while only 10 kilograms are declared in its books, it deposits the remaining 90 kilograms of gold in a Gold Deposit Account and simultaneously borrows the same amount of gold from the bank. This circulation of gold employed as working capital legitimates a low level of tax payment and allows the company to declare its true production volumes. Subsequently, as this transaction is repeated, the 10 kilogram equity is eventually deleted from the books.(Akman, 1996). This is no doubt a cumbersome solution to the problem and a change in the related tax regulations must be implemented.

3.4.5.2 Location Problems

For small artisanal jewellery manufacturing operations, finding a suitable location where they can expand their operations remains to be a problem. The substandard and often cramped conditions of the workshops inhibit expansion and modernisation because there is not enough space to install machinery or to recruit additional workers. In order for these operations to expand, they have a need for the necessary modern infrastructure which cannot be found among the ancient, small workshops in and around Grand Bazaar. In solving this location problem, the installation of modern equipment, and the subsequent improvement of the quality in final products, are prerequisites for the enhancement of jewellers' competitiveness (Oztepe, 1996).

In order to address the problem, the Istanbul Chamber of Jewellers has pioneered a project known as 'Jewellers City' to be built by The Istanbul Artisan Jewellers Production Site Construction Co-operative, founded in 1988. The aim of the project is to consolidate various workshops into an organised industrial area, and assist the jewellery entrepreneurs who seek suitable alternative sites in order to pursue greater production and quality targets. The project is planned to be completed by the year 2000 and will provide the jewellers with modern infrastructure and larger production capacity. It is projected that the new site will provide the jewellery industry with the

capacity to increase the estimated US$1.2 billion of annual foreign exchange earnings from gold jewellery exports, to US$4.5 - US$5 billion (Oztepe, 1996).

The projected capital outlay for the envisaged Jeweller's City is US$150 million, and it will be placed on a tract of 186 000 m^2. It will comprise 2000 capacity units of which will be allocated to retailers and wholesalers, while the remaining 1500 will be occupied by manufacturers. It will also contain supporting facilities such as exhibition halls, symposium rooms, etc. It is planned to become the greatest business centre in the Balkan countries and Middle East, creating 35 000 jobs.(Oztepe, 1996).

3.4.5.3 Constraints due to Competition faced under the European Customs Union and Taxation

The Chamber members contend that the access to the European Customs Union created an unfair competitive environment for the gold jewellery manufacturers. There were no concessions extracted from the Customs Union negotiations to benefit the jewellery sector and the tariffs protecting the jewellery industry were discarded completely as of 1 January 1996. The removal of all import tariffs barring the penetration of Italian jewellery manufacturers, who can exercise dumping prices to inhibit the development of Turkish jewellery sector, created a threat for the sector. The gold jewellery sector that yields export revenue of nearly the same amount as the textiles industry, which is the leading export industry, has become very vulnerable to the competition faced from the Italian jewellery manufacturers. The members of the industry state that unless measures are taken to reverse this situation, the Turkish gold jewellery sector might be completely overshadowed by the Italian gold jewellery manufacturers, just as has happened the German and English gold jewellery sectors (Hasturk, 1996).

At the moment, imported gold jewellery is being taxed in a rather improper way. In Turkey, while the imported elements of production, mainly gold, are heavily taxed;

only the craftsmanship embodied on an imported finished gold product is subject to taxation. Jewellery manufacturers point out the application in Germany as an example where a 15% tax is levied on both pure gold and craftsmanship components of a gold product (Hasturk, 1996). Jewellers assert that the principle of mutuality must be applied to the taxes on gold products vis-à-vis trading partners.

3.4.5.4 Constraints caused by the structure of the Gold Sector

Besides disadvantages arising from the Customs Union agreement, there are also the setbacks caused by the low concentration in the jewellery sector in Turkey. The jewellery manufacturing sector comprises about 5000 firms, the majority of which are small operations. The fact that output is not concentrated in a few producers hinders the sector's ability to meet tourist demand and compete effectively in foreign markets.

In order to address this problem, the latest development about the orientation of small and medium scale operations towards exports are the 'Sectoral Foreign Trade Companies' (SDS's). The Under-secretariat of Foreign Trade has issued a Communiqué stating that the anonymous companies with a minimum paid capital of 5 billion Turkish liras (about US$45 000 in January 1997) composed of 10 or more medium and small scale operations, and employing 1 to 200 workers, will be legally titled 'Sectoral Foreign Trade Companies' (Altug, 1996). These companies will have the priority to be granted education, research and development, advertisement/fair/sample supported Government aids and low interest credits in order for them to increase their export capacity and competitiveness. The partners of these SDS's will not be permitted to export individually but must pass their exports through this company. Likewise, SDS operations will not be permitted to become involved directly in any manufacturing activity.

Setting up a SDS which takes the form of a co-operative of small and medium scale operations will bring a few advantages. Establishing a single brand name common to

all workshops, which will be advertised and supported by the SDS, will provide workshops with an ability to become competitive which they would not otherwise have achieved individually. The SDS will closely follow the developments in the export markets on behalf of all partners, to inform them about opportunities emerging as a result of economical or legal changes in these markets. By organising the domestically rivalling jewellery manufacturers for export competition, a SDS will monitor and regulate the export prices offered considering the dynamics in the target market, and avoid destructive competition among Turkish companies.

The Istanbul Chamber of Jewellers plans to found the "Istanbul Jewellers Sectoral Foreign Trade Company". There is no reason why the Chamber, with its 9 200 members, should not succeed in doing what 236 small and medium scaled glass and jewellery manufacturers in Austria did in 1947 by merging their export activities (Altug, 1996).

3.4.6 *Organisations of the Jewellery Manufacturers*

Craftsmen who either work on their own, or who employ only a few apprentices, operate most of the small scale jewellery manufacturing workshops. Despite the trend towards industrialisation, the sector is still dominated by craftsmen and their business patterns. These artisan jewellers in Istanbul formed an association to pursue their common interest in 1969. In May 1991, this association was converted into The Istanbul Chamber of Jewellers, which today comprises about 9 200 members. Jewellers with larger scale operations are members of The Istanbul Chamber of Commerce, and dual membership is not allowed (Oztepe, 1996).

The Istanbul Chamber of Jewellers (IKO) makes significant contributions to training and education in jewellery manufacturing sector. The IKO sponsors the cost of laboratories and the salaries of the master trainers of The Jeweller Apprenticeship Academy, having a capacity of 750 trainees. The IKO also sponsors the laboratory

cost and trainer salaries in the jeweller training departments of two high schools in Istanbul. In 1996, Kadirga Jewellers High School, which is also supported by the IKO, commenced with an education programme. Since 1993, the Istanbul Chamber of Jewellers has been sponsoring a branch in Marmara University in Istanbul which facilitates a two-year programme in jewellery design. Again, the master trainers' salaries and laboratory costs are borne by the IKO, and its attempts to upgrade this branch into a faculty accommodating a 4-year education programme continues. Additionally, in 1996, together with the Governor of Istanbul and the Technical Secondary Education Directorate of the Ministry of Education, a protocol has been signed to found and administer training schools in a time span of five years (IKO, 1996).

In other centres of jewellery production in Turkey like Izmir and Mersin, the structure of the sector is similar albeit on a smaller scale, but the chambers of jewellers in these cities did not have the capacity to organise efforts to address common problems. In order to overcome this situation, jewellers who are members of the chambers of commerce, associations of jewellers, and the artisan chambers have elected representatives to form an informal Executive Board. The Board has 17 members and the Istanbul Chamber of Jewellers acts as its Secretariat. The board conducts research on legal and financial issues pertaining to the jewellery manufacturing sector. It also organises meetings every six months with the attendance of about 60 members from various organisations, to discuss issues concerning the sector. The jewellery sector is now much better equipped and organised to define its problems and implement solutions (Ertuna, 1996).

3.5 Gold Mining Activities

Turkey lies within the Alpine-Himalayan Orogenic Belt and is a region of considerable geologic complexity. The northern Pontids and southern Taurids mountain ranges, with their lateral extensions, constitute the backbone of the country.

The search for and production of gold has been a significant characteristic of the Anatolian history. Despite the surveyed potential for gold production in Turkey and the projects being undertaken in gold research and production, Turkey is still not a gold producing country and sources supply from outside the country.

3.5.1 *Historical Background*

Although evidence of mining activity in Anatolia region dates back as far as 6000 BC, the Turkish mining sector was not shaped until 1935. In 1935, the Government passed laws creating and defining the roles of a state institute for exploration, Mineral Research and Exploration Institute of Turkey, and a public corporation for mining and electricity generation, Etibank. Both of these institutions have since played an important role in the development of Turkey's mining sector (Etibank, 1983).

Mining Law was enacted in 1959 in order to facilitate the promotion and supervision of exploration and mining operations. In 1964, this law was revised substantially in accordance with the development needs of the mining industry. At the same time a new Ministry, the Ministry of Energy and Natural Resources, was established to handle both the mining and the energy affairs of the country.

The 1960's witnessed a growth in mineral based industries, which stimulated exploitation of raw materials. Most of the investment, however, was carried out by state enterprises. While the private sector share of total fixed investment in the Turkish manufacturing industry was approximately equal to that of the public sector, the share of private sector capital in mining industry was only a quarter of that represented by the public sector. (Etibank, 1983)

The Third Five Year Development Plan (1974-1979), prepared by the State Planning Organisation, called for a rapid increase in the mineral production and export of minerals by both the public and private sectors. The goals were not achieved due to

unfavourable economic conditions both in Turkey and abroad. Turkey was facing an ever increasing bill for imports, particularly for oil, and experiencing declining demand for its exports, particularly minerals.

Nationalistic policies for mineral development were restored. The incentives to encourage investment in the mining industry by either foreign or private Turkish companies were inadequate. All these factors combined to create a condition of stagnation in the mining industry. The passage of the 1978 Nationalisation Law expanded the state's involvement by nationalising privately held boron, lignite and iron ore deposits (Etibank, 1983).

In 1980, as part of the efforts to liberalise the Turkish markets and to encourage foreign investment, the Government set out to eventually repeal the 1978 Nationalisation Law, and reviewed the 1954 Mining Law, in order to make the laws comparable with modern mining legislation in other countries.

In order to attract foreign capital, the Foreign Investment Department was established within the State Planning Organisation in 1980. At the same time, mining projects involving foreign capital became eligible for investment incentives offered under the terms of Foreign Investment Law.

Provided that the foreign investor can contribute specialised skills in either production technology or marketing, the incentives available included:

- Exemption from various customs duties and import taxes.
- Tax rebates on fixed capital expenditures, depending on the type and location of the project.
- Subsidised medium and long term investment credits.

3.5.2 *Gold Mining Projects and Gold Deposits in Turkey*

In 1985, in line with above cited incentives, the Government granted site survey and mining permits in order to determine and exploit Turkey's gold potential. This attracted foreign investors' attention, and as a result of applications made for operation licences, nine foreign institutions were granted licences (Gurer, 1994). The international companies like the Australia-Canada based EUROGOLD MINING, South Africa - Germany based TUPRAG MINING, Canada based COMINCO MINING, ANGLO, RIO, RTZ and DARDANEL, alongside the Turkish Mining Research and Exploration Institution, have found rich gold and silver deposits.

As shown in Table 7, these foreign companies have identified approximately 7 million tonnes of gold and silver deposits as a result of their exploration activities. In the four mining fields, 6 tonnes of gold and 32.9 tonnes of silver will be produced annually from 966 250 tonnes of ore. The life of mine reserves of these mines are estimated to be 6-8 year, and a total of 44.7 tonnes of gold and 230.5 tonnes of silver is projected to be produced.

Table 7: Reserves and Production Capacities of Gold Mines at Investment Stage

Mining Field	Total Reserve (ton)	Annual Ore Production (ton)	Metal Production			
			Annual (ton)		Total (ton)	
			Gold	Silver	Gold	Silver
Balikesir-Havran	1,500,000	250,000	1.2	2.6	7.2	15.6
Izmir-Bergama	2,980,000	372,500	3.0	2.5	24.0	19.7
Eskischir-Sivrihisar	950,000	118,750	0.7	0.4	5.6	3.2
Artvin-Cerattepe	1,600,000	225,000	1.1	27.4	7.9	192.0
TOTAL	**7,030,000**	**966,250**	**6.0**	**32.9**	**44.7**	**230.5**

Source: Turkish Mining Development Trust, 1995

The investment amount of these projects whose feasibility studies are completed and

sent to the related Government departments is estimated to be US$107.4 million, US$69.8 million of which will be in the form of direct foreign investment. The approximate value of 44.7 tonnes of gold, computed on the basis of the ruling average price of US$300/ounce in the first quarter of 1998, is US$430 million. Taking into consideration that the mine lives of the present projects are 6-8 years, the annual turnover from the 6 tonnes of gold produced each year amounts to US$61.5 million (Yigit, 1995).

Together with these projects where the planned total gold production is 44.7 tonnes, total reserves where exploitation is found to be economically viable amounts to 76 tonnes. Potential reserves identified in other gold fields is 17 tonnes. Additionally, in various metal deposits where gold occurs as a by-product, gold content is calculated to be 42 tonnes. According to these figures, the known gold reserves in Turkey amounts to 135 tonnes (Oygur, 1995).

3.5.3 *Present Situation*

Although the 44.7 tonnes of gold reserves do not emerge as a substantial prospect in comparison to the estimated 5 000 tonnes of idle holdings in the hands of Turkish people, it represents a promising beginning. The commencing of mines, where reserves have been identified, will open the way for the development of the Turkish gold mining industry. The exploration for gold in Turkey, based on modern deposit modelling techniques, was started 13 years ago. The enhancement of the present information about gold deposits and accumulation of expertise in gold mining in Turkey depends largely on the implementation of the mining projects. This will give the mining industry the opportunity to test the validity of the assumptions made at the exploration and planning stage.

However, production in the gold mine in Izmir, Bergama with 24 tonnes of gold reserve at a grade of 9 grams per ton could not be started, although this project is at

the most advanced stage compared to other mining projects in Turkey. The commencement of this mine is stalled due to concerns of the environmental groups about the planned production technology which will make use of cyanide in the extraction process (Gurer, 1994).

4. Gold Market Structure in Turkey

As stated earlier, strong domestic demand for gold products creates a dynamic gold market in Turkey. There is no gold production in Turkey and this demand for gold is met by gold imports from various international physical gold markets and recycling of scrap gold. The Gold Sector Reform plan targeted the liquidation of gold holdings in the hands of the Turkish people to increase the increment of demand met by recycled gold products and provide low-cost credit for the jewellery sector. However, it is anticipated that the injection of sufficient amounts of scrap to the market will only happen in the long term when the investors' confidence in the formal gold market institutions, especially in gold banking, will be established.

In Turkey, the demand for gold products consists mainly of Turkish people's demand for gold products for adornment and investment purposes, tourist demand for gold jewellery and demand coming from export markets which have been penetrated by Turkish jewellery manufacturers. Turkish gold jewellery purchasers mostly prefer plain gold products and this demand surges in July and August which are the summer months in Turkey. The tourism sector creates the environment for direct gold exports, and research indicates that about 40% of the tourists visiting Turkey purchase gold jewellery. The foreign demand for Turkish gold jewellery products come mainly from Germany and the United States, with smaller quantities being exported to countries in Europe, in the Gulf region and to Turkmen republics in Central Asia.

The details of the supply and demand structure in the Turkish gold market are discussed in the sections below.

4.1 Gold Supply

Turkey is a net importer of gold and supplies gold from various international markets through the IGE. Together with Dubai, Singapore, Hong Kong and Taiwan it is a part

of the so-called 'Oriental Gold Gauge' in the Middle East. These 5 major physical gold markets have imported 1 010 tonnes of gold in 1994 according to official data, despite the serious economic crisis suffered in Turkish market (Murray, et al; 1995). In addition to the gold bullion imported, an average of 50 tonnes of scrap gold is injected into the Turkish gold sector each year.

4.1.1 *Gold Imports*

Table 8 shows the amounts of gold imported by the Central Bank and the IGE since 1989. The gold imports in 1996 reached 136 tonnes which is an increase from 1995 level of 122 tonnes. In addition to this, 53 tonnes of scrap gold entered the market in 1996. The estimation that the quantity of gold bullion re-exported mainly to Iraq and Syria was lower than the 1995 level implies that there was a strong increase in the use of domestic jewellery manufacturers (Murray, et al; 1997a).

Table 8: Gold imports by Central Bank and IGE in Kg. (1989-August 1996)

	1989	1990	1991	1992	1993	1994	1995	1996
JANUARY	0	6845	7719	5528	13085	3946	2704	6050
FEBRUARY	0	3445	1746	4386	9366	2545	2842	8450
MARCH	732	9918	1880	7872	10726	1843	5452	10550
APRIL	2517	9990	5262	8900	12015	-783	2570	7700
MAY	8581	11773	8828	4876	10996	-2342	8414	6725
JUNE	6663	16152	4436	12786	14301	-2725	9641	6500
JULY	14941	21758	18675	17569	17625	2609	15551	18575
AUGUST	17809	21425	19567	28952	27931	11116	20902	
SEPTEMBER	10743	12362	14900	13911	26700	5485	12686	
OCTOBER	8576	16905	13543	8833	9100	5106	8946	
NOVEMBER	13039	9251	7378	7155	6769	2985	7390	
DECEMBER	6540	4608	8228	9364	4226	2686	15377	
1Q	732	20208	11345	17786	33177	8334	10998	25050
2Q	17760	37915	18526	26562	37312	-5850	20625	20925
3Q	43493	55544	53142	60432	72256	19210	49139	18575
4Q	28155	30764	29149	25352	20095	10777	31713	0
TOTAL	90 141	144 432	112 162	130 132	162 840	38 321	112 475	64 550

Source Istanbul Gold Exchange, 1996

4.1.2 *Gold Holdings in the hands of Turkish People*

The Gold Sector Reform plan was based on the projection that following changes and development in the market structure and financial instruments would motivate the liquidation of the gold holdings in the hands of the Turkish people, and convert it into gold credits flowing to the jewellery sector. The amount of gold recycled is expected to increase in the coming years as Turkish gold holders will be motivated to liquidate their gold holdings to invest in gold instruments launched by banks.

Until 10 years ago, anyone who bought gold in Turkey in jewellery, coin or bullion form was called a 'Turkish gold investor'. Gold was the sole instrument to store wealth and conserve the value of the investment. However, in the post-1980 era when several breakthroughs had been achieved in the Turkish financial market and new investment alternatives were introduced, uses of gold as jewellery and a store of wealth were slowly separated (Akman, 1994). Availability and promotion of various investment alternatives increased investor awareness and revealed the disadvantages of hoarding the pure gold content of a piece of jewellery. At present, there are a number of gold consumers who purchase gold only for its adornment quality.

Nonetheless, a substantial number of the gold purchasers still consider gold only as an investment instrument. Especially in the rural areas, Turkish families still store their savings in gold products. A survey about the gold demand coming from urban and rural areas found that urban areas created 60% of the total demand, as opposed to 40% coming from the rural areas. The small difference in percentages is unparalleled to the large gap between the income levels in the rich industrialised urban areas and the relatively poor rural areas where the core economic activity is agriculture. This is a good indicator of the strength of demand coming from the rural areas (Akman, 1994).

A survey in Istanbul indicated that 71% of respondents have gold in their portfolios and for 8% of those who hold gold, it represents half of their wealth. A nation-wide

survey indicated that 31% of households in Turkey save a portion of their income and 25% of this portion of the population save in gold. About 40% of the correspondents would consider depositing their gold in deposit accounts (Ertuna, 1994a). Figures obtained from Toprakbank indicating the amount of gold accumulated in the gold deposit accounts in a short space of time, supports the result of this survey that gold holders are increasingly responding positively to gold deposit accounts.

In order to meet the demand by the jewellery manufacturers, there should be investors in the market who are willing to part with their gold savings against compensation, besides having a high propensity to save in gold. As mentioned above, Turkey has great potential as gold is still an indispensable instrument in Turkish people's traditional savings patterns. The estimated amount of gold currently held ranges from 800 - 8000 tonnes, but it is largely accepted to be 4000-5000 tonnes on average (Akman, 1994). Physical gold holdings are mostly owned by women in the rural areas as ornaments and stored "under the pillow".

Nevertheless, Turkish people also proved adaptable for innovations in the financial market, as observed by the shift to newly developed investment instruments. New instruments introduced in the financial sector, such as asset backed securities, have been largely welcomed and the Istanbul Stock Exchange has also become a favoured alternative for a number of gold investors.

However, it is not likely that the savings patterns of the investors will change immediately, and gold held will be liquidated and deposited in the banks. A sudden conversion of physical gold holdings into paper instruments is not expected, but even a small percentage of liquidation of the bullion held would imply a major increase in gold supply in the Turkish gold market (Akman, 1996).

For gold investors to switch from the metal, which served as a reliable store of wealth, to gold backed financial instruments, they must be convinced that these investment

vehicles represent less risk and greater profit. The confidence in the overall economic condition of the country with all its active components and economic agents such as the Treasury, Central Bank, unions, etc., operating smoothly and efficiently in a politically stable environment, will play a major role.

4.2 Gold Demand

The gold demand in Turkey continues to surge having added to its dynamism the demand for gold jewellery coming from the tourism sector except at times like the Gulf War in 1990 or major macro-economic crises as in 1994. Research by the World Gold Council, on a world-wide basis, regarding consumers revealed that in Turkey gold sales had increased by a real 50% to US$6 billion from 1992 to 1993. In 1993, Turkey had reached a record level of 163 tonnes of gold imports. In 1995, the economy recovered from the severe economic crisis suffered in 1994 and 110 tonnes of gold including scrap or 63 tonnes of gold without scrap was used to fabricate jewellery (Murray, et al; 1996).

The demand for gold is increasing in parallel to the positive outcomes of the reform being implemented in the sector. In 1996, the industrialisation mechanism in the jewellery sector explained above accelerated, and the Turkish jewellery manufacturers made significant progress. Many new factories were set up and many of the medium and large-sized operations were expanded while many small scale workshops were closed. The gold fabrication in carat jewellery in 1996 was increased to a 10 year high of 140 tonnes from a 110 tonnes level in 1995 (Murray, et al; 1997a).

4.2.1 *Domestic Demand*

There is a strong seasonal demand for gold products during the months from April to September. These spring and summer months are the times in which weddings and other traditional and religious ceremonies. Gold products are the traditional gifts given

to the members of such ceremonies. As seen in Table 5, total gold sales on the IGE reached 21.1 tonnes in July and peaked at 25 tonnes in August 1996.

Characteristically, demand also surges during the holiday following Ramadaan. During the Muslim fasting month of Ramadaan in 1996, trade is said to have come to a standstill but rose immediately afterwards. During the holiday that followed Ramadaan, demand from the Grand Bazaar increased as the people bought gold jewellery gifts. The exchange hit a record volume of 1,875 kg on February 27 (Mining Magazine, 1996).

As to the regional turnovers of the gold sector, it was stated that from 1992 to 1993, gold sales in the Marmara region displayed a real increase of 40% reaching a level of US$2 billion, whereas the total sales of gold products in the Aegean and Mediterranean regions reached US$1.5 billion, with a real increase of 90% (Akman, 1994).

4.2.1.1 Demand for Gold Products

Among gold coins, gold bullion, gem-set jewellery and plain jewellery; Turkish gold purchasers prefer mostly the plain gold products followed by gold coins. The main item in the gold jewellery sales with an 80% share is plain gold products. 22 carat bangles comprise an important portion of the plain gold product which are the major traditional means of investment in the Turkish market where gold bullion is not widely preferred. However, even in the rural areas a trend towards lower carat gold jewellery is clearly discerned in the recent years indicating that gold jewellery is now being purchased for its adornment value (Murray, et al; 1996). The other factor underlying the move to lower carat jewellery is the exposure to Western values and tastes through the media. The second most preferred gold product is the gold coin. Coins are either stored in safes or attached to gold chains and used as pendants.

In order of preference, after the 22 carat gold bangles, which are stored as a guarantee towards contingencies, were 22 carat coins and 24 carat bullion which were purchased with the same intention. 14 and 18 carat jewellery such as rings, necklaces or earrings, rank after 22 carat coins and 24 carat bullion (Akman, 1994). In the Tables 9 and 10, data pertaining to coins printed by the Turkish Mint is cited. The increase in coin purchases from 1994 to 1995 can be attributed to the restoring of gold assets liquidated during the economic crisis in 1994.

In the same survey, it was calculated that the per capita amount of money allocated for gold purchases remained the same at US$135 from 1992 to 1993. On the other hand, the average amount spent on gold by the people who actually bought gold was US$500, increasing by 45%. This was because of a reduction in the gold purchase frequency accompanied by a substantial increase in the value of the gold products bought.

Table 9: Amount of coins printed by the Turkish Mint in 1995

Grams	36.08	35.08	18.04	17.54	7.216	7.016	3.608	3.508	1.804	1.754	Tot Kg
Jan	180	0	0	5551	10887	36784	297	26361	6523	147288	737
Feb	120	0	0	13481	12665	51832	297	71508	11860	282664	1,343
Mar	300	31	60	14152	26969	49400	891	61812	14232	297660	1,439
Apr	120	93	60	9150	5513	32680	891	44541	6523	239646	944
May	300	62	0	15860	2384	45904	2079	54237	14232	269830	1,216
Jun	240	93	120	17751	6556	56140	1188	76962	17197	502755	1,791
Jul	30	0	0	4819	149	21432	594	29088	4151	250470	722
Aug	270	93	0	13054	2891	48336	2079	65145	14825	579590	1,724
Sep	420	0	60	6283	7599	18392	1485	25149	10081	223850	747
Oct	180	155	120	15616	10430	54112	2376	61206	39731	172425	1,229
Nov	150	31	0	8540	1937	27512	297	37875	11267	219615	827
Dec	570	0	60	6649	46935	25840	2376	39390	13046	220220	1,113
Total	2880	558	480	130906	134915	468364	14850	593274	163668	3406013	13,853

Source: World Gold Council, 1995

Table 10: Gold Fabrication in Coins (Kg)

Year	1992	1993	1994	1995
Quantity	2,048	7,139	6,818	13,833

Source: World Gold Council, 1995

In this period, there was no change in the gold possession ratios as 80% of the people possessed gold. The number of women holding gold was 16% more than the number of men who actually possessed gold.

About 30% of the people interviewed expressed their intention to buy gold in the following year. As one of the main expenditure and investment items, gold products were stated by the highest number of people and ranked third after immovable assets and bank deposits together with home appliances having a weight of 6% in the total expenditure.

4.4.1.2 Results of Research on Gold Product Consumers

In April 1992, the Social Planning Department of the State Planning Organisation published the results of its research titled 'The Nature of the Turkish Family'. According to this survey carried out across Turkey in 18 210 households in 1988, gold investors are found mostly in cities. They are in the age group of 25-44, educated at the level of a university degree and belong to the upper income group.

Another public research on the consumer segments and their behaviours in the gold market in Turkey has been conducted in 14 major Turkish cities on a sample of 2 565 female consumers, which represents the urban Turkish women population. According to the results of this survey, there are 4 substantial consumer segments in the Turkish urban population which are homogenous within, and heterogeneous between, the bases of their perception of and attitudes towards gold both, as an investment

instrument and jewellery.

The first segment of consumers is called the status seekers and composes 34.2% of the total gold consumers. They perceive gold as a means of gaining social status and think that gold's investment value is more important than its adornment value. The second segment, which is 24% of the total consumers are called the design seekers. They think gold is valuable as jewellery and are heavy consumers of gold jewellery. The third segment is called the indifferents, who are not major gold consumers. The fourth segment is called the sustainers, as they depend more on their husbands for the preference and payment of gold jewellery, and their taste in gold jewellery is more classical and oriental (Piar-Gallup, 1996a).

The purchase of gold in 1995 was the highest among the segment of consumers who are highly educated, having a high income level and who seek quality. One out of three people from this segment have bought gold jewellery in 1995. Gold purchased in 1995 was the highest among the consumers aged between 25-34 and 45-54. While 22% of the highly educated women bought gold coins in 1995, only 15% of the moderate and 19% of the poorly educated women bought gold coins. This is mainly because of the difference in the income levels and dependence of the poorly educated women on their husbands for gold jewellery purchases. Another finding of the survey was that 35% of the urban Turkish women population had the intention of purchasing gold products within the next year (Piar- Gallup, 1996a).

4.2.2 Tourist Demand

The domestic market for gold in Turkey is always dynamic with the exceptions of economic crisis times. This keeps the industry up and running and also provides a testing outlet for new products. Additionally, jewellery sales to tourists support the market. Tourism, being one of the most important foreign exchange earners for the economy, also creates the environment for direct gold exports which can simply be

described as the gold product purchases of foreign tourists.

The research indicates that approximately 40% of the tourists visiting Turkey buy gold jewellery. According to the Turkish Tourism Association 1996 report, Turkish tourism sector accommodated 7.7 million tourists which created a market of US$4.9 billion in 1995. Turkey is in the top 20 in the world's most popular tourist destination ranking.

The Piar-Gallup public research firm was assigned in August 1996 to carry out research into the gold purchasing behaviours and motives of tourists according to the variations between tourists of different countries of origin in order to give direction to the World Gold Council in their efforts to prepare promotion and marketing campaigns whose target consumer segment is tourists. This research was conducted in 9 of the top tourist attraction sites in Turkey: Istanbul - Grand Bazaar, Izmir, Antalya, Side, Alanya, Fethiye, Marmaris and Bodrum. Within the context of the research 378 Russian, German, English, French, Dutch, Belgian and Austrian tourists who have bought gold jewellery or any gold product during their stay in Turkey were interviewed.

According to the results of this survey, tourists mostly buy gold rings (34.20%), chains (32.0%), necklaces (24.9%) and earrings (23.3%) among the other gold products. 70% of the tourists buying rings prefer stoned rings whereas most of the other gold products bought apart from rings are without stones. About 48% of the tourists prefer 14 carat gold. Around 90% of the tourists buying gold jewellery buy them as jewellery not as an investment instrument.

One out of every two tourists had information about the gold jewellery sold in Turkey before they came, and approximately 40% the tourists had already decided to buy gold jewellery before they arrived in Turkey. Dutch tourists led with a ratio of one to two, as to those who had the intention of buying gold before coming to Turkey. The

information which most of the tourists had acquired before their arrival about the gold sold in Turkey is 'its being cheaper compared to their own country'. The other issues concerning gold in Turkey that they are informed about are 'the good craftsmanship' and ' indigenous designs'. The most common source of information is the word of mouth.

Among the motives that drive the tourists who actually bought gold products in Turkey, although they did not have the intention before their arrival are, 'the attraction of gold products in windows', 'low prices', 'influence of the salesman' and 'high variety of products'. About half the number of tourists were attracted by the jewellery's fascinating appearance in the windows.

The majority of the tourists stated that they had not bought any gold jewellery from any other country before, except for 4.7% of them who had previously bought gold jewellery in Italy. This result of the survey clearly implies that buying gold jewellery is not a general behaviour of tourists, but an activity that is associated distinctly with Turkey.

As to the results obtained from the survey, the average amount of money a tourist spends on gold jewellery is US$572, which constitutes 13% of the average total money spent in Turkey by tourists. The amount of money spent on gold products by individuals ranges from US$120 to US$2400. However, the mode of the whole range, which is the interval with the highest number of observations, is the US$500 level. Russians incur the highest expenditure on gold with an average of US$726 per person. German tourists spend on the average 16% of their total expenditure on gold jewellery in Turkey.

The increase in the sales to tourists was an important factor in booming jewellery fabrication in 1996. More significant than the normal sales to tourists in 1995 and 1996 has been the 'suitcase trade' involving mainly Russian and to a lesser extent East

European visitors. This business involves purchasers buying mostly gold chain at a 'semi-wholesale' level and taking it back to their country for resale (Murray, et al; 1997b).

4.2.3 *Export Market*

Turkey emerges as an important gold market not only for the Western countries but also for the entire region extending from the Atlantic Ocean to the Indian Peninsula. Competitive labour market and modernisation of production technology is and will be playing a major role in the development of the Turkish gold industry which has reached a certain level of competitiveness. Turkey's export market is expanding rapidly. Turkey's formal export of gold jewellery is focused on Germany and the United States. Smaller quantities are exported to other countries in both East and West Europe as well as to the Gulf and the Turkmen republics of the CIS. In 1996, exports to Germany were mainly cheaper plain gold items, while several manufacturers continued their export promotion in the United States market (Murray, et al; 1997a). A significant rise in exports to the United States is expected in the coming years, because of the decision by the US authorities to extend the period of trade privileges applied to Turkish exporters in October 1996. This has led to many smaller manufacturers also getting involved in exporting gold jewellery to the United States (Murray, et al, 1997b).

The Turkish expatriate workers living in Germany and coming to Turkey on holidays have always been an important factor, increasing the demand for gold products during the summer months. Although it can still be discerned as a seasonal factor in the local jewellery demand in the Turkish market, it has lost its significance. It appears that many of the expatriate workers now purchase their gold product requirements for gifts from the Turkish-owned jewellery shops in Germany (Murray, et al; 1997b). Thus, the demand coming from this segment of the gold consumer, supplied by the Turkish gold market, must now be analysed under export markets.

5. ROLE OF THE WORLD GOLD COUNCIL IN THE IMPLEMENTATION OF THE REFORM

The World Gold Council (WGC) was established in Geneva, Switzerland under Swiss regulations as a non-profit organisation by 66 gold producers from 12 countries representing a 27.8 million ounce production or 50% of the Western World gold production (Bertran, 1994). Its aim is to support the world gold demand by supplying market data and product information to gold market dealers, providing management assistance, consulting for marketing, promotion and jewellery design activities and making special publications including know-how guides.

WGC branches try to promote the gold jewellery manufacturing sect · the countries they operate to a capacity where the sector becomes mature and competitive in terms of technology, designs and marketing. The ultimate aim for any WGC branch in the world is to close an office as soon as the sector proves to be doing well in all these capacities. Nevertheless, there has not been a country where the WGC branch has been shut down yet (Akman, 1996).

The WGC founded its first branch in the Middle East in Dubai, United Arab Emirates in 1989. The Istanbul branch was opened in August 1991. Today, the Dubai and Bombay offices are also responsible for the Saudi Arabian and Indian branches. The WGC plans to set up two offices in India, while supporting the office in Turkey, to enhance its capacity so that it will be able to operate in the Central Asian Turkmen republics.

The annual gold consumption in the countries serviced by the WGC was 821 tonnes in 1993. The consumption of gold in the European markets was 286.2 tonnes in the same year. This implies that the serviced countries had 2.9 times as much gold consumption as those in the European market. Turkey comprises 17% of the amount by virtue of 138 tonnes of gold consumed (Bertran, 1994). Turkey is considered to be the sleeping

giant of the region by the WGC, and by the financial sector and jewellery industries.

When the Turkish gold sector had entered the above described transitional stage in 1991 with the initiative of the Government, the WGC opened an office in Istanbul which operates in four main areas. *One* area is the education programs and publications in technical issues. The WGC translates a number of periodicals and relevant research articles into Turkish, and publishes this information. Another of its activities is the organisation of design and jewellery contests, education programs, and publications in jewellery designing. The WGC organises a seminar in gold jewellery production technology every year. *Secondly*, there is a seminar arranged by the WGC at a higher level which gathers the administrators and the policy makers related to the sector (Ertuna, 1994a). *Thirdly*, the WGC provides the Government with consultancy services such as the expertise lent in the establishment of the IGE. As part of its duty, the WGC has acted as a consultant to The Capital Market Board in the process of changing the law prohibiting the free circulation of foreign exchange in the country, and the law sanctioning a precious metal exchange. Its duty was to assist the legislators by demonstrating similar applications in other countries. After these activities reached a level of accomplishment, the WGC continued its assistance to the sector by consulting the banking sector in their efforts to develop gold backed instruments (Akman, 1996). *Finally*, the WGC helps the jewellery manufacturers in their promotion attempts, and instructs the sector about marketing tactics. The activities carried out by the WGC to promote the gold sector in Turkey is explained in the following sections in detail.

5.1 Promotion and Marketing Assistance

For a long time, even after the implementation of the liberalisation measures, there was little awareness of the importance of marketing in the Turkish gold sector. For the members of the sector, marketing consisted only of the logistics of supplying retailers with their products. The WGC pioneered an advertising campaign for Turkish gold

jewellery with an advertising campaign throughout Europe, which had an enormous impact on the members of the industry in terms of changing their traditional approach to marketing. The industry members realised the importance of shared tastes and designs world-wide, and soon after the campaign two of the large-scale jewellery manufacturers launched their own advertising campaigns.

Another development initiated by the WGC was the establishment of mega stores to trade through large jewellery stores, spacious showrooms and sale areas. Mega stores were founded first in the Antalya free trade zone and shortly afterwards in other tourist sites. Co-operation with the tourism agencies to include mega stores in the tours' itineraries contributed to their success. It was reported that in one of the mega stores, the turnover from jewellery sales in the second quarter of 1993 had reached US$15.5 million (Ertuna, 1994a).

When the WGC Istanbul Branch was first set up in 1991, the advertisement expenditure budgets of the jewellery manufacturing companies were very limited due the lack of an understanding in the sector about the importance of planned advertisement. In the first few years after its establishment, the WGC extended funds to the jewellery manufacturers to support their promotion activities. At present, the WGC limited its assistance to providing know-how support about promotion activities because the funds available in the WGC budget for monetary assistance can only defray a mere 10-15% of the marketing budget of a well-established sector company (Akman, 1996). The managers of jewellery manufacturing firms are now convinced that the funds the WGC is capable of providing for marketing campaigns are hardly adequate to achieve enough publicity and they allocate a portion of their own capital in marketing activities.

5.2 Technology Improvements

After it was opened, the WGC hired technical experts to evaluate the current state of

technology in the jewellery manufacturing industry and provided one-to-one consultation for members of the industry. Technology seminars, sponsored by the WGC, took place in Istanbul, Izmir and Mersin, and the quarterly Gold Technology magazine was distributed to interested members of the industry. One important development which had a very strong impact on the perceptions of the sector was the organisation of the international fairs and exhibitions for jewellery products in Istanbul. Rataforte, a private fair organisation agency, was able to obtain the co-operation and participation of members of the jewellery sector for its annual Jewellery Products Fair. Perhaps even more important were the visits of Italian machine manufacturers to the fairs, where their stands were enthusiastically visited by producers, and who sparked off new ideas in technology and manufacture (Ertuna, 1994a).

The activities of the WGC, the new perspectives opened by the trade fairs, and the growth of exports, all encouraged the members of the sector to improve their competitive position in export markets by purchasing new machinery mostly from Italy. Technicians came from Italy to install the machines and these encounters with the experts in other countries increased the self confidence of the entrepreneurs in the sector, and encouraged them to take further initiatives. Importing necessitated the establishment of relationships with the banks and developed the skills to do business in co-operation with the financial sector.

5.3 Jewellery Design

Turkish culture inherits and melts in its own pot the remnants of civilisations which flourished in Anatolia, and the Turkish artists have rich inspiration to create outstanding artefacts. However, for decades the jewellery manufacturers simply imitated the works of European (especially Italian) designers, instead of exploiting the rich Turkish cultural inheritance and could develop their own indigenous design quality (Oztepe, 1996). The WGC identified this problem in the sector and engaged in

attempts to remedy the situation.

Even before opening an office in Istanbul, the WGC sponsored a seminar on jewellery design which was followed by other seminars and contests in the years following the establishment of the Istanbul branch. Awareness of the importance of indigenous styles and designs resulted in the establishment of design departments by the leading jewellery manufacturers. After an initial period of imitation, the leading members of the sector started their attempts towards creating their own special designs. In March 1993, a competition took place in Antalya which received large support and which was repeated six months later (Ertuna, 1994a).

The WGC carried out a thorough socio-cultural research to define the attitudes of Turkish consumers, and published its findings about the rising trends in jewellery design in 1994. The study examined the trends in jewellery design which would influence the sector in the following two years. Result of this research was compiled in a Trend Book called Gold Trends 95-96, Turkey, published by the WGC. The idea leading to the publication of this Trend Book was to predict future trends and prepare designers, manufacturers, retailers and wholesalers for changing consumer expectations. It also provided both designers and manufacturers with a new source of inspiration to create their own individual collections. Mimosa, Anatolia and Bosphorus were three tendencies depicted in the Trend Book 95-96. Mimosa designs were for those who want to precisely express their individuality by breaking conventional rules. They were the designs of the future. Designs of the Anatolia trend, on the other hand, are the manifestation of a rich cultural heritage and were just appropriate for those who are in search of their roots. The Bosphorus trend rediscovered the wealth of the Ottoman Empire (World Gold Council, 1995).

The WGC encourages the designers to form their pieces of jewellery in a way to conform to these tendencies. After some time, the compliance of the jewellery designs to the tastes depicted in the Trend Book is tested by the WGC by means of two

contests. One is the contest among the manufactured jewellery and the other among drawings of designs. In the jewellery contest the manufacturers are expected to modify the Anatolian motives they embodied in their designs according to the trends pointed out in the Trend Book, in order to meet the tastes and preferences of the world market consumers. Craftsmanship content as well as aesthetics of a piece of gold jewellery are decisive in determining the winner. The manufacturers are allowed to submit only one piece or set of jewellery and jewellery that has formerly competed in another design contest is not accepted.

For design drawings there are no limitations for entry. After the pre-election, the successful designs and jewellery are compiled in two different catalogues. Then, 2000 design drawing catalogues are published and made available to the manufacturers while 3000 jewellery catalogues are disseminated to wholesalers and retailers. These catalogues are also distributed in the fairs abroad and sent to potential customers in foreign markets. These contests and catalogue activities are very useful in the sense that they make the artists, manufacturers and salesmen all meet, and act as an incentive to the qualified people.

The WGC plays an important role as the gold institute giving the sector all the vital assistance it can provide in areas such as promotion, vending, etc., where the sector is most inexperienced. Its essence for the Turkish sector will never cease to exist as long as there is demand for gold in the country.

6. CONCLUSIONS

As a result of the liberalisation movements implemented in the foreign exchange and gold markets which effectively started in 1983, the Turkish gold sector flourished and started to gradually materialise its competitive capacity. From a sector smuggling about 80 tonnes of gold into the country every year, the Turkish gold sector developed to the strength where it imported 163 tonnes of gold through legal channels and exported 8 tonnes of gold jewellery through the Turkish Mint in 1993.

The liberalisation movement was a mere attempt to legalise and harness the competitive and financial capacity that the Turkish gold sector already had developed over centuries rather than being an attempt towards uplifting the sector by providing assistance in capacity building. The aim of the liberalisation process was to remove the prohibitive regulations driving the sector underground and to open the ways that the sector could use to integrate with the formal economy. Driven by the existence of a robust domestic consumer market, the sector had grown so much as to help the Central Bank in foreign debt servicing in foreign exchange crises. This capacity had been developed despite the sector's operations being mainly underground and despite the lack of gold production in Turkey. This existing technical, productive and financial capacity in the sector forced the policymakers to adjust the regulatory environment. It can be deduced that the prerequisite and the trigger for growth in any sector is the availability of required capacity within the sector, rather than creating the system or the policy environment where the operations are invited to become formal through liberalised and simplified mechanisms.

This deduction was further strengthened by the status of the sector in 1993 and the opinions of the sector members. Consequent to the liberalisation measures, gold smuggling had been completely eliminated. The margins between the domestic and

international gold prices had been decreased and gold imports had started to be carried out via formal chan . The jewellery sector had benefited from these improvements in the market conditions and reconfigured. However, these changes did not suffice to end the complaints of the gold sector members, address all their problems, and subsequently, draw them fully into the formal economy. For example, only a few registered to become Export Authorised Institutions and exported through Institutions established by other manufacturers. The most common objection was to the monopoly position of the Central Bank where only it, and not the market, could control the price. The gold trading structure was not geared for an efficiently operating and interacting market.

The most important problems faced by the jewellery manufacturing sector such as the difficulty in financing working capital and implementing the necessary improvements in production technology remained unsolved. Additionally, the sector needed assistance in planning and devising effective marketing strategies. There were still measures to be taken by the Government to make the gold sector environment more conducive to development and the incentives to operate legally, and therefore properly audited, more attractive. Thus, the sector once again forced the Government to take another step to complete the betterment of the environment, by catering for several needs of the sector. The Gold Sector Reform Model was designed and included in the Government protocol in 1993. This reform model consisted of following components which required certain actions to be taken:

- The Istanbul Gold Exchange
- Gold backed financial instruments and derivatives
- Gold refinery
- Gold mining
- The gold jewellery sector

The intention in the foundation of the IGE as the first step of the planned gold sector

reform was to legitimise the physical gold market in the Grand Bazaar and to draw the average 150 tonnes of average annual gold import transactions and 300-500 tonnes of trade, into the formal economy. Except for the fact that it could not take over the role of a physical gold market from the Grand Bazaar, because of the long established logistics of trading gold in the Turkish market, the IGE has fulfilled its duty satisfactorily. As a physical market, the IGE operates regularly and plays a useful role. It creates a physical gold market by backing and undertaking the payment and delivery operations. The gold prices are determined in free market conditions and buyers and sellers carry out transactions smoothly at the determined prices. The development of the exchange has further narrowed the price margins between the world gold markets and Turkey, and helped to establish fair prices. It also contributed to the establishment of trading standard gold meeting the specifications required by the international gold markets. The next step will be the modification and enhancement of the IGE to contain futures market after its maturation as a physical market together with further developments in the sector. The establishment and the success of the IGE proved that the markets need deregulated trading systems where supply and demand conditions are the only factors likely to have any influence, and which are supervised by the Government rather than dominated and intervened.

Although several entrepreneurs are looking into the feasibility of establishing a refinery, none of these has materialised. The establishment of a gold refinery is expected to be the outcome of the increased activity in the banking sector and the structural development in the jewellery manufacturing sector. The fact that a refinery has not been set up yet indicates that the smelter workshops with low capacities operated in the Grand Bazaar and by the banks can carry the overall need for recycling scrap gold. As there is no mine gold production in Turkey, a facility refining gold ore is also not an urgent need for the sector. However, a definite need discerned is the need for a refinery which will manufacture semi-processed gold products such as gold wires and gold leaves in different colours and hardnesses. This facility will save the jewellery manufacturer from going through all the time-consuming production stages

starting from the melting of bulk gold and help him to concentrate on the final stages where he specialises. Thus, it is evident that vertical integration in the jewellery manufacturing sector works to the detriment of the jeweller and it is much more beneficial to outsource semi-processed gold products from a refinery manufacturing these inputs at large scale and at a lower cost.

Even under the assumption that all the planned gold mining projects will be commenced within two years, a total of 44.7 tonnes of gold production over the coming ten years is not a considerable amount when compared to estimated amount of gold imports and the expected liquidation of gold holdings in the hands of the Turkish people in the same period. However, joint ventures to be established between the gold mines and a gold refinery for mining and refining gold ore and manufacturing semi-processed gold products for use in jewellery manufacturing may bring several advantages. The jewellery manufacturing sector might supply semi-processed gold products at lower cost which will increase their international competitiveness while the gold mines still receive a price higher than that prevailing in the international market.

The gold jewellery sector was already an established, robust industry at the time when the reform plan was designed. However, besides the shortcomings in the financial support structures and marketing strategies, as mentioned earlier, there were still areas such as inadequate infrastructure, flaws in the related tax regulations, and the unfair competition created by the Customs Union agreement which had to be addressed. Problems related to finance and marketing have been solved to some extent through the implementation of the reform plan components and progress made in these areas will be explained below. The location problem and the infrastructural shortcomings will be solved after the completion of the Jewellers City project implemented by the Istanbul Chamber of Jewellers. The flaws in the tax regulations and the vulnerability of the jewellery sector to the penetration of the Italian jewellery manufacturers which increased after the entry to European Customs Union remain to be unsolved. Despite

these negative factors, the official jewellery exports in 1996 were estimated to increase to 15 tonnes from 8 tonnes achieved in 1993. Another 55 tonnes of jewellery is estimated to be exported through informal channels, tourists or expatriate Turkish workers indicating the positive effect of the developments achieved in the sector via the reformation movements.

However, this is still a very low level of exports in comparison with the capacity and the opportunities available to the sector. There is no reason that the Turkish jewellery industry cannot reach levels of 75-80 tonnes of official gold jewellery exports like Italy. The gold content in a finished jewellery product is exported for a price of about twice as much as the bullion gold price. In the case where the Turkish jewellers are producing 150 tonnes of jewellery a year, the exported half of this amount finances the other half implying that 75 tonnes of wealth stored in gold is being annually transferred to the country as a result of the jewellers' production activities.

The Turkish gold sector with its exchange, financial institutions, refinery and especially jewellery manufacturers has massive business opportunities. The factors necessary to achieve an extensive development in the sector such as the domestic and foreign demand, cheap and skilled labour, expertise and huge amounts of idle gold holdings are all present. Today, around 2-3% of the annual national turnover in Turkish economy is generated by the gold industry. This is strong proof that the sector already has a substantial weight in the economy. In order to enhance the jewellery manufacturing sector's contribution to the overall economy or through easy access to an efficiently operating capital market and to solve the sector's financial problems, the co-ordination within the gold sector is maintained by implementing the components of a gold reform plan. Parallel to the accomplishments reached within the context of this plan, the gold sector will continue contributing to the national economy like other sectors in which Turkey has a comparative advantage.

Broadly, the conclusion is that, for any informal and illegal sector in an economy the mere licensing or legalisation thereof is not enough for development. After this stage,

much still needs to be done to develop a suitable economic environment within which the sector can operate and flourish. The Turkish experience reflects a learning curve of in excess of 15 years. Learning from this experience, however, can significantly shorten this time frame in other economies where similar sectors are either undeveloped, or operating informally.

APPENDIX I

GOLD REFINERIES WHOSE PRODUCTS CAN BE TRADED ON THE ISTANBUL GOLD EXCHANGE

COUNTRY	COMPANY
Australia	Golden West Refining Corporation Limited
	Harringtons Metallurgist Limited
	Johnson Matthey Limited
	Western Australian Trading as Australian Gold Refineries
Belgium	SA Johnson Matthey N.V.
	MHO a division of S.A.
	Acec Union Miniere N.V.
Philippines	Central Bank of the Philippines
Romania	Uzinele Metalugice de Metale
Singapore	Degussa (Private) Limited
South Africa	Rand Refinery Limited
Spain	Industrias Reunidas
	Minero-Metalurgicas, S.A. (Indumetal)
	Sociedad Espanola de Metal Preciosos S.A. (SEMPSA)
Sweden	Buliden Mineral A.B.

Switzerland	Argor Heraeus S.A.
	Cendres & Metaux S.A.
	Metaux Precieux S.A.
	Metalor
	Pamp S.A.
	Valcambi S.A.
England	Engelhard Limited
	Johnson Matthey Plc.
USA	ASARCO Incorporated
	Engelhard Corporation (New Jersey Refinery)
	Hand & Harman
	Homestake Mining Company
	Johnson Matthey Inc.
	Metalor USA
	United States Assay
	Offices & Mints
Russia	State Refineries
Zimbabwe	Fidelity Printers & Refiners (Private) Limited
Italia	Metalli Preziosi SpA
Japan	Ishifuku Metal Industry Company Limited
	Mitsubishi Materials Corporation
	Mitsui Mining and Smelting Co. Limited
	Nippon Mining & Metals Co. Limited
	Tanaka Kikinzoku Kogyo KK

	Tokuriki Honten & Company Limited
N. Korea	Central Bank, DPR of Korea
Mexico	Met-Mex Penoles, S.A.
Netherland	H Drijfhout & Zoon's Edelmetaalbedrijven BV
	Schone Edelmetaal BV
Brazil	Banco Riame SA
	Casa de Moeda do Brasil
	Degussa SA
	Mineracao Morro Velho SA
Canada	Engelhard of Canada Limited
	Johnson Matthey Limited
	Noranda Mineral Incorporated (Division CCR)
	Royal Canadian Mint
China	Refinery of China
France	Engelhard S.A.
	Comptoir Tyon-Alemand
	Louyot-Paris
Germany	Degussa AG
	WC Heraeus GmbH
	Norddeutsche Affinerie
	Aktiengesellschaft

REFERENCES

Akman, M. (1994) *The Valuation of Gold Demand and Supply and The Contributions of Istanbul Gold Exchange to the System*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi - Istanbul, 1994, pp. 15-19.

Akman, M. (1996) *Personal communications*, World Gold Council, Istanbul Branch, Nisantasi - Istanbul, August 1996.

Altug, O. (1996) *Turkey's Foreign Trade Policy*, Gold News, Istanbul Chamber of Jewellers, August 1996, p.10.

Aytekin, B. (1996) *Personal Communications*, Istanbul Gold Exchange, Eminonu-Istanbul, August 1996.

Aytogu, K. (1996) *Gold refinery will be established next year*, Hurriyet Newspaper, Istanbul, 24 October 1996.

Berki, N. (1994) *Istanbul Gold Exchange*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 9-10.

Bertran, P.A. (1994) *Opening Speech*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 7-8.

Clark, M.B. (1995) *A Look Behind the Paper*, Metals in the News, NYMEX, Fall 1995, p. 11

Demiralp, S. (1994) *The Legal Preparations in Under-secretariat of Treasury and Foreign Trade about the Liberalisation in Turkish Gold Market*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 27-30.

Duyar, M. (1996) *Personal Communications*, Istanbul Gold Exchange, Eminonu-Istanbul, August 1996.

Ertuna, O. (1994a) *Liberalisation and Gold Sector Reform in Turkey*, Research No:1, World Gold Council, Istanbul, 1994, pp. 29-70

Ertuna, O. (1994b) *The Liberalisation Attempts in Turkish Gold Market*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul,

1994, pp. 23-26.

Etibank (1983) *Turkey: The Mining Industry, Opportunities for Investors*, Etibank, Ankara, August 1983, pp. 6-7.

Fild, L. (1997) *Has the glitter gone out of gold forever?*, Saturday Star, Business Times, Money, Johannesburg, 17 September 1997, p. 5.

Murray S., et al. (1995) *Gold Survey 1995*, Gold Fields Mineral Services Ltd., London, May 1995, pp.39-53.

Murray S., et al. (1996) *Gold Survey 1996*, Gold Fields Mineral Services Ltd., London, May 1996, pp. 15-67.

Murray S., et al. (1997a) *Gold Survey 1997*, Gold Fields Mineral Services Ltd., London, May 1997, p. 45-65.

Murray S., et al. (1997b) *Gold Survey Update 1997*, Gold Fields Mineral Services Ltd., Lodon, September 1997, pp. 41-63.

Green, T. (1993) *The World Of Gold*, Rosendale Press Limited, London, 1993, pp. 200-203.

Green, T. (1991) *The Gold Companion, The A-Z of Mining, Marketing and Technology*, Rosendale Press Limited, London, 1991,

pp. 3-153.

Gurer, A. (1994) *The Effects of Gold Minirg to Gold Supply and Market*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 20-22.

Hasturk, H. (1996) *War with Italy*, Gold News, Istanbul Chamber of Jewellers, Istanbul, August 1996, p. 8.

Istanbul Chamber of Jewellers (1996) *Proceedings of 13th General Assembly*, Istanbul Chamber of Jewellers, Istanbul, 1996, p.13.

Istanbul Gold Exchange (1996) *IGE Bulletin*, Istanbul, August 1996, pp.1-12.

Kaytaz, M. (1994) *Automation and Futures-Options Market in Istanbul Gold Exchange*, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 34-35.

Mining Journal (1996) *Turkey Tourist Gold Boost*. London, March 22, 1996, p.215.

Murphy, R.D. (1994) *World Gold Flows and Integration and Influence of Istanbul Gold Exchange on*

this System, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 11-14.

NYMEX (1995) *Gold Futures and Options*, New York Mercantile Exchange, New York, 1995, pp. 2-15

Oygur, V. (1995) *Gold Potential of Turkey*, Proceedings of the Gold Mining in Turkey Conference, Ankara-Hilton Hotel, Turkish Mining Development Trust, 1995, p.8.

Ozer, B. (1993) *Gold Banking*, World Gold Council, Istanbul, December 1993, pp. 1-9.

Oztepe, M.Y. (1996) *Personal Communications*, Istanbul Chamber of Jewellers, Cemberlitas-Istanbul, August 1996.

Piar-Gallup (1996a) *Market Survey on Consumer Segments in Gold Market in Turkey*, Piar-Gallup, Istanbul, October 1995 - January 1996, pp. 1-15.

Piar-Gallup (1996b) *Market Survey on Purchasing Behaviours and Motives of Tourists*, Piar-Gallup, Istanbul, August 1996, pp. 6-10.

Saglam, M.H. (1993) *Gold, Futures Transactions in World Exchanges*, First edition, Exchange Library Series, No:2, Istanbul, 1993, Scale Press, p. 5.

Sevig, V. (1995) *The Principles to be Complied and Taxation in Gold Trade*, Survey No:2, World Gold Council, Istanbul, 1995, pp. 8-13.

Sonmez, C. (1994) *Gold Backed Investment Instruments*, Istanbul Gold Exchange: Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 36-38.

Robinson I.C., Von Below M.A. (1990) *The role of the domestic market in promoting the beneficiation of raw materials in South Africa,* Johannesburg, April 1990, pp. 92-97

Williams, K.H. (1995) *Lecture to Department of Mining Engineering Students,* University of the Witwatersrand, Jojannesburg, 26 October 1995, pp. 1-5.

Weston, R. (1983) *Gold, A World Survey*, St. Martin's Press Inc., 1983, pp. 15-17

Yardimci, S. (1994) *Gold Standard in Istanbul Gold Exchange and the Contributions of a*

Refinery to be Established, Proceedings of Istanbul Gold Exchange: Target, Operations and Integration to World Markets, World Gold Council, Ciragan Sarayi, Istanbul, 1994, pp. 39-40.

Yardimci, S. (1996) *Personal Communications*, Toprakbank Nuruosmaniye Branch, Eminonu-Istanbul August 1996.

Yigit, E. (1995) *The Economic Extent of Gold Mining in Turkey*, Proceedings of the Gold Mining in Turkey Conference, Ankara-Hilton Hotel, Turkish Mining Development Trust, 1995, pp. 20-22.

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