

Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics



Bachelor Thesis

Analysis of Gold Commodity

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Department of Economics

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BACHELOR THESIS ASSIGNMENT

Jakub Novotný

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Thesis title

Analysis of gold commodity

Objectives of thesis

Evaluate global gold commodity market. Assess its future prospects. Identify main determinants for price oscillation of gold. Evaluate impact of financial crisis upon gold price.

Methodology

Literatre review will be done by using methods of induction, deduction, synthesis and extraction. Analysis will be done by both quantitive and qualitative approach. Particularly, methods of fundamental and technical analysis are utilized such as moving averages, etc.

The proposed extent of the thesis

40 pages

Keywords

gold market, gold commodity, technical analysis, fundamental analysis

Recommended information sources

Fabozzi, Frank J, Roland Füss, and Dieter G Kaiser. The Handbook Of Commodity Investing. Hoboken, N.J.: John Wiley & Sons, 2008. Print.

Gold, Gerald. Modern Commodity Futures Trading. New York: Commodity Research Bureau, 1975. Print.

Gold: The Once and Future Money – Nathan Lewis

The Goldwatcher: Demystifying Gold Investing – John Katz

The Structure and Operation of the World Gold Market – Gary O'Callaghan

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Declaration

I declare that I have worked on my bachelor thesis titled "Analysis of Gold Commodity" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the bachelor thesis, I declare that the thesis does not break copyrights of any third person.

In Prague on _____

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Analysis of Gold Commodity

Analýza komodity zlata

Summary

This bachelor thesis deals with a very important commodity in today's world. This commodity is gold, which is in this thesis examined from an economical point of view. First part of this thesis is literature review, which informs the reader about important factors such as history of gold or investment and also helps to understand it. Second part is mainly analytical, gold is analysed using the fundamental and technical analysis. Fundamental analysis analyses supply and demand. Particularly it analyses its historical development and composition of market. Technical analysis focuses on the development of price using specialized tools which are very own to this method. These tools evaluate both past and current state. Thanks to those tools it is possible to make important decisions whether to buy or sell at a certain state of market, which is also the main objective of this thesis.

Keywords: gold market, gold commodity, technical analysis, fundamental analysis

Souhrn

Tato bakalářská práce se zabývá velmi důležitou komoditou v současném světě. Touto komoditou je zlato, které je v této práci zkoumáno po ekonomické stránce. První částí této práce je literární rešerše, která seznamuje čtenáře s důležitou problematikou jako historie zlata nebo investice a zároveň mu ji pomáhá pochopit. Druhá část je především analytická, zlato je analyzováno především za pomoci fundamentální a technické analýzy. Fundamentální analýza analyzuje nabídku a poptávku. Konkrétně jejich historický vývoj a složení trhu. Technická analýza se soustřeďuje na vývoj ceny zlata za pomoci speciálních metod vlastní této analýze, které vyhodnocují jak minulý tak současný stav. Za pomoci těchto metod je možné dělat zásadní rozhodnutí a vyhodnotit zda je zlato lepší prodat či koupit za určitého stavu, což je také hlavním cílem této práce.

Klíčová slova: trh se zlatem, komodita zlato, technická analýza, fundamentální analýza

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1 Introduction

Gold is a very valuable, metal that has been very important to human life since its discovery. At the beginning it was the yellow shiny colour, however after evolution and many years, it is not only the appearance, but also its properties that this metal possesses that it so very important. Even though it plays a very important part in technologies, still the main usage of gold is in jewellery, thanks to two main facts – its price and looks. In addition it is almost indestructible, therefore it is perfect for long term hold and measurement of wealth. This was recognized not just by single persons, but also by central banks all around the world, which began amassing it. Today there is commonly know that it is ideal investment, especially in time of crisis and that is because the link between gold and inflation is actually very limited. The price of gold is very volatile nowadays, but in the past it was held on a stable level. It was actually until 1971 that gold was interchangeable with the US dollar. The amount that is annually mined is actually only a very small part of total gold, most of it has already been mined in the past and therefore when demand increases it can be actually covered very easily by the ground gold.

2 Objectives and Methodology

2.1 Objectives

The main goal of this thesis was to evaluate gold as a commodity and also analyse its price movements on the market. In order to understand gold's market it was necessary to firstly introduce gold itself. Therefore in the first part of this thesis the objective was to introduce gold from many different views, as gold is usually viewed by most people as a precious metal used for jewellery production. In order to understand how the gold market works and how volatile its price can be in certain times, it was very important to not only introduce, but also understand its history, basics of investing and some alternatives of gold. In the second part the objective was to analyse gold's supply, demand and the development of gold's price in order to understand deeply the gold commodity market. This was done so that it is easy to read the current state of the gold market and make a decision based on such data whether to invest in gold or wait for a more suitable point in time and market development.

2.2 Methodology

This bachelor thesis is divided into two main parts. The first part is a literature review which was done by using various methods such as extraction, synthesis, induction and deduction. This was done by firstly studying literature which was dealing with topics that mattered greatly to this thesis, such as the history of gold or different markets around the world. This helped the author to understand many of the core issues in this topic, which helped him to transfer this knowledge and address it further. Besides that it introduces many factors to the reader and thus helps him understand many of the core issues. The second part was an analytical one, divided into fundamental analysis and technical analysis. Fundamental analysis is focused on supply and demand. It is mainly historical development, which gives more information to the reader about the gold market, not only for recent years, but also for a few decades to the past. Technical analysis is the main part of this thesis, because it is focused on the development of gold's price. This was done by collecting available data and creating charts by using an online application and the utilization of many technical analysis tools. Thanks to those tools it was possible for the author to assess the current state of gold price development and therefore give suggestions.

3 Literature Review

3.1 Gold Attributes

- Latin name: Aurum
- Symbol: Au
- Atomic number: 79
- Melting point: 1060 °C
- Boiling point: 2800 °C
- Density: 19,3 g/cm³

Gold is a very rare metal, which means that like some other metals it is a good conductor of heat and electricity. That is why it is so important in many technologies. It has a shiny yellow colour and it is stable substance. On the other hand gold is actually quite soft just a bit harder than for example your fingernail. Since gold is so stable, it cannot be dissolved in usual acids and bases with the exception of Aqua Regia, therefore it is very resistant, almost indestructible metal. It has the highest malleability and ductility of any element. Those attributes are mainly used in areas like jewellery and electronics. Also gold is actually quite heavy thanks to its density which means that a cubic meter of gold weights 19,300 Kg. Since it is so heavy it is estimated that most of it is located in the core of Earth. Nevertheless gold has been found on every continent. It can be found in free nature in form of small flakes or nuggets. Still the most common form is gold veins, which means that it has to be mined. Gold can also be found in sea water, but there is no effective way to extract it¹.

There are also many types of gold alloys. Commonly gold is described with number and letter 'K', which stands for karats. This basically tells you how much gold is in that object. If there is more than 99% of gold, it is noted as 24K. From number 24 it goes down to 1, which means that naturally 12K has 50% of gold with

¹ Barthelmy, D. (2015). *Mineral Species sorted by the element Au Gold*. [online] Webmineral.com. Available at: <http://webmineral.com/chem/Chem-Au.shtml#.VQFOy4iNNFc> [Accessed 5 Jan. 2015].

rest being some other metal such as copper or silver. Gold can also have different colours, which is the result of mixing gold with another metal.

- **White Gold:** This colour is achieved by mixing gold with a metal of white colour such as nickel manganese or palladium. It usually has a 14K.
- **Rose, Pink and Red Gold:** To take this colour, gold has to be mixed with copper. The more copper in the alloy, the darker the tone of red that will surface. Common Rose gold is usually composed of 18K, while common red is composed of 12K.
- **Green Gold:** This one is known as electrum and is a natural forming alloy which combines gold and silver.

Also it is very important to note that gold is weighted in Troy Ounce (Oz). It is a unit of measure used for precious metals and gemstones. One troy ounce is equal to 31.1 grams. So don't mistake it for a regular ounce².

3.2 History of Gold

3.3 Early History

History of gold is actually quite long one, definitely longer than one would expect. It was already in around 6000 B.C. that we have first findings of gold, which tells us how inventive our race is. In this time gold was used mainly to create jewellery. It took several hundreds of years, but first time in the history gold was used as recognized currency. It was around year 1500 B.C. that gold-silver coins were made in the Middle East. This coin was called Shekel. In year 50 B.C. the Roman Empire begins to mint golden coins and since they , at the time, controlled all of the know gold mines it was a very important step, since it increased their development as an empire. Over the next few centuries the gold history is always spinning around wars and the lust for fortune.

In year 1799 the first gold was discovered in the US. And in 1803 at Little Meadow Creek there was a big discovery of gold, which started the first US gold rush ever. Over the

² Goldresource.net, (2015). *Types of Gold*. [online] Available at: <http://goldresource.net/types-of-gold/> [Accessed 5 Jan. 2015].

next few decades there were many discoveries of large gold deposits not only in the US, but also Africa and Australia. Every gold rush resulted in a big surge of workers that wanted to become rich and make a lot of money however only for a very small part of them was it profitable. Still this resulted in a big increase of gold supply which increased global trade and investment resulting a many profitable merchant and transport companies. Probably the most important gold discovery at this time was in South Africa. Since then, it was the source of nearly 40% of all gold ever mined. In 1898 there is the last gold rush of the century in Klondike, Alaska³.

3.3.1 Gold Standard

A very important part in the history of gold and also in the human history played Gold Standard. The gold standard was a commitment by participating countries to fix the prices of their domestic currencies in terms of a specified amount of gold. National money and other forms of money (bank deposits and notes) were freely converted into gold at fixed price. Now what does this actually mean? If you are in a country, which is under the gold standard, there has to be a fixed price for a certain amount of gold. This means that you are able to exchange gold for currency and vice versa. Even though you could exchange gold for money in the 18th century, true gold standard begins with the Gold Standard Act which happened in 1900 and officially sealed gold as interchangeable. During this time most of the countries adhered to gold. The gold standard was both domestic and international standard. As a domestic one it regulated the quantity and growth rate of country's money supply. The price level did not vary much thanks to the guaranteed free convertibility of gold into non-gold money and also because new production of gold was small part of the already accumulated stock. Only big new gold discoveries caused the price level to fluctuate. As an International standard it determined the value of a country's currency in terms of other countries' currencies. This was thanks to the fixed price of gold, the rates of exchange between currencies were necessarily fixed⁴.

Since the exchange rates were fixed and tied from one country to another, any shocks in one country had an impact on domestic money supply, expenditure, price level

³ Anon, (2015). 1st ed. [ebook] Available at: http://www.nma.org/pdf/gold/gold_history.pdf [Accessed 6 Jan. 2015].

⁴ Eichengreen, B. and Flandreau, M. (1997). *The gold standard in theory and history*. London: Routledge.

and real income in another country. Also it meant that the price levels around the world would move together. However since economies under to gold standard were so vulnerable to real and monetary shocks, prices were highly unstable in the short run.

However gold standard came to a halt with the year 1914 and the beginning of the World War I, thanks to war expenditures and the quick rise of gold demand, which exceeded gold supply many times. This led to a huge inflation. After the war many countries went back to the Gold Standard as it was re-established in 1925, but it didn't take long and many of them left it in 1930s. After that Great depression started in the US. Countries that abandoned Gold standard earlier were able to recover faster⁵.

3.3.2 Bretton Woods System

Bretton Woods, New Hampshire, in 1944 most of the world's leading nations met there to create a new international monetary system. One of the main aims of this conference was to not make the same mistakes that were made after the World War I. It led to stabilize international monetary systems. It was based on international help between the members and the agreement that world currencies will be tied to dollar, which will be convertible for 35\$ an ounce. This meant that central banks other than the US one, would maintain fixed exchange rates. This was due to the fact that US were the strongest member and therefore had the most impact on everything. However Soviet Union rejected Bretton Woods System as well as Marshall Plan which later on led to a Cold War⁶.

Since currencies were tied to dollar, if one currency would be too high to a dollar central bank would just sell its currency for dollars, which would lower the value of its currency. And if the value was too low the country would buy its own currency, thereby increasing the value. 1950s and 60s were in sign of great economic boom in all countries with US as leader. However fixed exchange rates brought new problems. Since US continued to export its capital, they found themselves in balance of payments deficit. Thanks to that most of the dollar stock was not in the US, but in other countries, which

⁵ Econlib.org, (2015). *Gold Standard: The Concise Encyclopedia of Economics | Library of Economics and Liberty*. [online] Available at: <http://www.econlib.org/library/Enc/GoldStandard.html#> [Accessed 7 Jan. 2015].

⁶ Bordo, M. and Eichengreen, B. (1993). *A Retrospective on the Bretton Woods system*. 3rd ed. Chicago: University of Chicago Press.

greatly exceeded the US gold reserves. This meant that the trust in US dollar was lower and lower, which was backed but the increasing US inflation. Also one of the main factors was not really successful war in Vietnam .This ultimately led to a devaluation of some currencies⁷.

This system essentially lasted until 1971, when a thing called Nixon Shock happened. As the name tells us, it was certainly a shock, since it cancelled the fixed value of the dollar and allowed it to float. There was no direct convertibility for gold anymore. After a short time other countries followed the US in cancelling fixed rates and allowed their currencies to float. However even though the exchange rates were not fixed, still many central banks controlled the rate so it would not appreciate and therefore hurt export.

It all resulted into a Great Inflation that remained throughout the 1970s and ended in the early 1980s⁸.

3.4 Investment

As has been already mentioned, gold has some very unique properties that separate it from not just other metals, but also other kinds of investment. This means that gold is invested a lot in. Thanks to its high price, high density, good workability it has the ability to concentrate high financial value into small amount. This is used to advantage by many people and also countries, which amass large reserves of gold in their central banks⁹.

⁷ Bordo, M. and Eichengreen, B. (1993). *A Retrospective on the Bretton Woods system*. 3rd ed. Chicago: University of Chicago Press.

⁸ About.com Education, (2015). *The Bretton Woods System: Tying World Currency to the Dollar*. [online] Available at: http://economics.about.com/od/foreigntrade/a/bretton_woods.htm [Accessed 12 Mar. 2015].

⁹ Fabozzi, F., Füss, R. and Kaiser, D. (2008). *The handbook of commodity investing*. Hoboken, N.J.: John Wiley & Sons.

3.5 Why invest in gold?

Investing into gold is probably easier than most people think. Today investing into gold bars or into bullion coins doesn't mean going into jewellery store, rather into bank or some specialized firm. Of course there is always the possibility do it completely from home over the internet. Since gold is basically wealth insurance, when the decision to invest is made, it is probably, because of the need to cover potential losses and therefore it can be made almost anytime.

- Gold is and will be the most popular rare metal in the world
- Gold demand is increasing and most likely will continue to do so in the future
- It is considered to be a hedge against inflation
- No other investment is so safe as gold
- Gold should be part of financial portfolio
- Unlike currencies, shares and securities golds value will never drop to zero
- It does not lose its value during wars, social and political crisis or natural disasters¹⁰

3.5.1 Stable Value

Gold has a one very important advantage and that is the ability to store its value for a long period of time. Thanks to that it stored in large amounts in central banks. This ability to main its value keeps even in times like wars or many kind of crisis, which is very important in recent years and happenings¹¹.

3.5.2 Reduction of Risks

Since golds value has historically moved independently of other assets, it is a very important part in portfolio. Investing all your money into one single asset can be very risky

¹⁰ Fabozzi, F., Füss, R. and Kaiser, D. (2008). *The handbook of commodity investing*. Hoboken, N.J.: John Wiley & Sons.

¹¹ Bullionvault.com, (2015). *Gold Investment | Investing in Gold Bullion | Guide from BullionVault*. [online] Available at: <https://www.bullionvault.com/guide/gold/Gold-investment> [Accessed 7 Jan. 2015].

and also not clever, therefore including gold in financial portfolio reduces its volatility and minimises losses during periods of market shock. It reduces the risk of investments and losses¹².

3.5.3 Inflation and Currency Hedge

In time of inflation when the prices of goods rise, there comes the need for protection against it and also against the decreased value of currency. The value loss of currency happens due to inflation and it is over time. Since the value of gold is very stable over long time, gold has kept its value, even increased it during times of inflation, therefore it is considered to be a very good investment that protects from inflation. This also results in an increase of golds price, because when value of currency goes down investors try to cover it by investing into gold, which is proved to be very safe¹³.

3.6 Types of Investment

There are naturally many different ways, how to invest into gold. Whether it is physical or non-physical, this chapter will look on some of such cases.

3.6.1 Bullion Coins

It is a coin that is struck from some precious metal, in our case gold. Even though it is a coin it is not used for paying in a store, but as a store of value or an investment. There are many different official bullion coins across the world. Many countries produce several kinds of such coins, for example Australian Kangaroo Gold Coin.

South Africa's gold producers developed the concept of ounce-denominated gold bullion coins in the 1960s, however it was in 1970, when the first ounce-denominated gold bullion coin was launched in mass-produced quantities¹⁴.

¹² gold, W. (2015). *Why Invest In Gold | World Gold Council*. [online] Gold.org. Available at: <http://www.gold.org/investment/why-invest-gold> [Accessed 8 Jan. 2015].

¹³ Gold Rate for Today -- Check Now!, (2011). *Gold as an Inflation Hedge*. [online] Available at: <http://goldratefortoday.org/gold-inflation-hedge/> [Accessed 7 Jan. 2015].

¹⁴ Gold bullion Coins. (2014). 1st ed. [ebook] Available at: http://www.goldbarsworldwide.com/PDF/BI_14_GoldBullionCoins.pdf [Accessed 9 Jan. 2015].

Gold bullion coins usually come in four sizes with specified weight of gold. Those are 1 oz, ½ oz, ¼ oz and 1/10. However the most important one is 1 oz bullion coin, because it accounts for over 80% of the total amount gold used in the manufacture of bullion coins. This is because 1 oz coins have a lower percentage premium above the value of their fine gold content and a smaller spread.

There are different gold purities to be found around the world. The most common contain 99.99%, 99.9%, 91.67% and 90% gold. This also means that bullion coins cannot contain less than 90% gold which is 0.900 of purity. Very important to note is, that to make the coins more durable, additional alloy content is added such as copper or silver. This results not only in better durability, but also a much higher weight.

Features of every bullion coin:

- They are issued at prices that are not fixed but based on the prevailing value of their fine gold content. – Thanks to this feature gold coins are traded by dealers and investors at a price that reflects current international gold price.
- Mass-produced in large quantities. – This ensures that the premiums at which they are traded above the value of their fine gold content are relatively stable.
- Legal tender coins in their country of issue. – This feature means that bullion coins have technical specifications guaranteed by national Acts and regulations.
- Nominal or no face values. – Whether issued with or without monetary face values, their market value are directly related to the value their fine gold content¹⁵.

3.6.2 Gold Bar

Gold bars basically come in two kinds, as a cast or minted gold item. While cast bars are directly produced from gold that has been melted, minted bars are actually cut from a cast bar that has been rolled to a uniform thickness. The shape of the bar can vary

¹⁵ Gold bullion Coins. (2014). 1st ed. [ebook] Available at: http://www.goldbarsworldwide.com/PDF/BI_14_GoldBullionCoins.pdf [Accessed 9 Jan. 2015].

and isn't particularly important. Usually there are markings which are mainly functional and show such information like name of the manufacturer or issuer, weight, gold purity and serial number. Since there are many manufacturers around the world, the characteristics of gold bars vary a lot. However the minimum purity, that is considered to be a good delivery is at least 0.900. There is often a motif or design on the reverse side of the minted bars. Most of the gold bars are consumed by jewellery, industrial and other fabrications. However they still have capacity to be used both as fabricators and investors¹⁶.

3.6.3 Forwards, Futures, Options

Forward

Forwards are basically a regular contract between two parties to buy or sell an asset in our case gold, for a current price on a future date. However forwards are not traded in stock markets and therefore are described as over the counter deals. Thanks to this, forwards are not so easily available to the retail investor as futures. Forward can be customized to any commodity. Forward can be very well used as a hedge or speculation, although it is particularly good for hedging. It is also very important to note that because forwards are private transactions, they unlike futures, there is a bigger risk. Also they are basically unregulated which means that some manipulations may occur. Since the forwards are private the general information is not public, therefore even though the market for forwards is huge, the size of the market is very difficult to estimate¹⁷.

¹⁶ Definitions: Bar Types. (2014). 1st ed. [ebook] Available at: http://www.goldbarsworldwide.com/PDF/BI_4_DefinitionsGoldBars.pdf [Accessed 9 Jan. 2015].

¹⁷ Elvis Picardo, C. (2003). *Forward Contract Definition* | Investopedia. [online] Investopedia. Available at: <http://www.investopedia.com/terms/f/forwardcontract.asp> [Accessed 10 Jan. 2015].

Futures

Futures are actually very similar to forwards. Again, it is a contract where the price is agreed upon in presence. However the actual transaction happens in a future date that is predetermined. The contract obliges the buyer to purchase an asset such as a physical commodity or financial instrument. So when such a contract is agreed upon, buyer expects the price of the asset to go down, while the seller on the other hand expects the price to go up. Futures can be used the same way like forwards, as a hedge or to speculate. Unlike forwards, futures take place in exchange markets, which is the biggest difference between them. Thanks to this they are very well regulated since the contracts are reported to the future's exchange, the clearing house and at least one regulatory agency¹⁸.

Options

Option is a contract where the buyer is given the right to buy an asset for a specified price or before specified date. To make it clear the biggest difference here between option and future is that the buyer is not obliged to buy asset unlike with future and also forward. Beside that option is again very similar to future and forward. Therefore what stands out the most is the extreme versatility of option, since there is the option to renounce the contract. However it still depends on what side does hold the right¹⁹.

3.7 Gold Market

Since gold is such an important asset in trading, it is only natural, that over the history many marketplaces emerged, that not only enabled such trading, but also focused it in one place. Such market is usually a consortium of local banks and specialized firms and

¹⁸ Investopedia, (2003). *Futures Definition | Investopedia*. [online] Available at: <http://www.investopedia.com/terms/f/futures.asp> [Accessed 11 Jan. 2015].

¹⁹ Staff, I. (2003). *Options Basics: Introduction | Investopedia*. [online] Investopedia. Available at: <http://www.investopedia.com/university/options/> [Accessed 12 Jan. 2015].

does not only serve for trading but also for exchange. Usually gold markets are part of the international financial markets and therefore can be found in various international financial centers. Currently there are over 40 gold markets around the world, which are forming the global market framework. Currently there are four most important international gold exchange markets: London Gold Market (London Bullion Market), America Gold Market (COMEX), Zurich Gold Market and Hong Kong Gold Market (CGSE). Those four major gold markets will be looked at in this chapter²⁰.

3.7.1 Bear Market

Figure 1: Gold Price - Bear/Bull market



Source: <http://www.gold.org/investment/interactive-gold-price-chart>

When talking about market, how it behaves, specifically if the price goes down or up in longer period of time, there are basically only two possible outcomes. The first one is called Bear market. Market is called Bear market when there is a long period of time, months or more, when prices of securities are falling. Even though numbers vary, usually a fall of 20% or more in broad market indexes, such as the Dow Jones Industrial Average is considered an intro into a bear market. As the prices are falling the negative atmosphere

²⁰ Myers, D. (2008). *Getting Into The Gold Market*. [online] Investopedia. Available at: <http://www.investopedia.com/articles/basics/08/gold-strategies.asp> [Accessed 12 Jan. 2015].

gets even worse, this results in even more selling as the pessimism grows. It is very important not to mistaken Bear market for a mere correction. Correction is only a short term trend that does not last more than two months. The term “Bear” comes from the actual animal and its way of attacking its prey. Bear attacks from above trying to take it literally down. As seen in Figure 1 after 10 years of Bull market, which ended in 1980, there was a really long period of time of Bear market. Even though there are some high and lows the price is ultimately still going down over many years, therefore it is great example of a Bear market²¹.

3.7.2 Bull Market

As has been mentioned above, when prices are going down, it is called bear market, therefore it is only natural that there is an opposite of this case, which is called Bull market. Since it is opposite to Bear market, Bull market occurs when price rises over a long period of time, at least two months or more. Since in case of Bull market, prices are increasing, it means there are investors who are optimistic enough, to buy more at a given price as well as sellers, who are willing to sell. This results in even more price increasing. Generally Bull market is exists if market indices rise at least 20%. Bull market appears logically when prices are considered to be low and investors and pessimistic, but then the market grows which results in more optimistic investors. This ultimately results in new trading highs as the trading activity increases. The term “Bull” has naturally similar meaning as in the case of Bear market, it comes from animal bull and the way it attacks enemies. Bull uses its horns to strike from below going upwards trying to impale enemies on them. There is clear Bull market as it is seen in Figure 1, that begins in 1970 and through 1978 when it is really rapid increasing in gold price and ending in 1980²².

²¹ Investopedia, (2003). *Bear Market Definition | Investopedia*. [online] Available at: <http://www.investopedia.com/terms/b/bearmarket.asp> [Accessed 14 Jan. 2015].

²² Investopedia, (2003). *Bull Market Definition | Investopedia*. [online] Available at: <http://www.investopedia.com/terms/b/bullmarket.asp> [Accessed 15 Jan. 2015].

3.7.3 London Gold Market

London Gold Market known also as London Bullion Market is today the largest gold market in the world. Its glorious history began already in the beginning of 19th century, when London took the first place as a gold exchange place from Amsterdam. The London Gold Market itself was established in 1919, when the price of gold was fixed twice, which affected trading in New York and Hong Kong. In 1987 the London Bullion Market Association (LBMA) was established by the Bank of England, which at that time was the bullion market's regulator. The LBMA took over the roles previously carried out by two separate organisations, the London Gold Market and Silver Market. This means that today London Gold Market trades not only gold, but silver as well. The LBMA covers setting and monitoring refining standards, creating trading documentation and fostering the development of good trading practices, however the main role is the maintenance and publication of the Good Delivery Lists for gold and silver. The trading happens among the members of the LBMA (more than 140) and is over-the-counter, which means it is done directly between two parties without any supervision. This means that such trades are not as transparent and that prices are not necessarily published for public. Every day there are two Gold price auctions and all the prices are expressed in US dollars pre fine troy ounce²³.

3.7.4 American Gold Market

The American Gold Market was developing mainly in the middle of 1970s. However unlike London Gold Market, the American one is mostly focused on gold future trading and today it is actually the world's largest trading volume and most active gold future market, as well as the most efficient complex futures trading organization. American Gold Market is actually recognized as the number one as precious metals trading center. This is thanks to major trading of metals like gold silver and copper, as well as gold futures and gold options. There are actually two divisions which merged together in 1994 which resulted in creating the world's largest physical futures trading exchange. Those are New York Mercantile Exchange (NYMEX) and Commodity Exchange (COMEX). Both are part of a CME Group, which runs them. While NYMEX division operates energy, platinum and

²³ [lbma.org.uk](http://www.lbma.org.uk), (2015). *LBMA - The London Bullion Market*. [online] Available at: <http://www.lbma.org.uk/the-london-bullion-market> [Accessed 15 Jan. 2015].

palladium markets, COMEX division operates metals like gold, silver and copper. However the trading of aluminium future contracts was incorporated into COMEX after the merge in 1994²⁴.

3.7.5 Zurich Gold Market

The Zurich Gold Market developed after the World War II. Since the 1960s Zurich has become the world's second largest gold trading market. Unlike other top gold markets, that have been mentioned, Zurich Gold Market does not have any formal organizational structure, which would be responsible for the liquidation by the three major Swiss banks: UBS, Credit Suisse and Union Bank of Switzerland. Zurich Gold Market does not have price fixing system, which means that the trading price is set based on the supply and demand the time of the trade²⁵.

3.7.6 Hong Kong Gold Market

Hong Kong Gold Market has actually quite long history, but it was in 1910 when the most important part of the market was established. It was the Chinese Gold and Silver Exchange Society (CGSE), however still under the name Gold and Silver Exchange Company, which was changed in 1918. In the beginning the exchange was only a small part in global picture, however over the years CGSE has secured a key position in the international gold market, thus belongs to top four gold markets in the world. CGSE currently has 171 members, 30 are bullion group members. Thanks to the geographical position of Hong Kong, it operates after the closing of New York market, but also before opening of the London market. Thanks to that investors can continue their trading and hedging activities in Hong Kong²⁶.

²⁴ Goldpriceoz.com, (2014). *International major gold market - Gold Price OZ*. [online] Available at: <http://www.goldpriceoz.com/international-major-gold-market.html> [Accessed 18 Jan. 2015].

²⁵ Goldpriceoz.com, (2014). *International major gold market - Gold Price OZ*. [online] Available at: <http://www.goldpriceoz.com/international-major-gold-market.html> [Accessed 18 Jan. 2015].

²⁶ Cgse.com.hk, (2014). *金銀業貿易場 The Chinese Gold & Silver Exchange Society*. [online] Available at: http://www.cgse.com.hk/en/about_01_1.php [Accessed 18 Jan. 2015].

3.8 Gold Alternatives

When talking about gold, even though it is such a special metal, there needs to be option when investing. Whether it is the question of money or just personal reasons, this chapter will look on some alternatives and options when investing.

3.8.1 Metal Alternatives

Naturally when looking into investment alternatives for gold, first thing that comes to one's mind is what is most similar to it, which are obviously other metals.

Silver

Silver is pretty much the same in terms of supplies, since most supplies come from either mining or recycling. However silver mining accounts for 80% of global supplies while only 19% are recycled. This means that gold is more dependent on recycling than silver. On the other hand gold is unlike other metals when comes to demand, because most of gold demand comes from jewellery, while in case of silver it is actually Industrial and Photography, which accounts for 55% of silvers demand, while jewellery is third after investments. There are multiple ways how to invest into silver, probably the most direct one is to buy physical bullion, which is similar to gold. However the easiest and most liquid way to invest in silver, are exchange-traded funds. Probably the biggest difference though, is the price, while gold sits currently around 1.200 for ounce, silver is only around 16 for ounce. Nevertheless it still does its job as an alternative to gold to protect against inflation. Also since the demand is mostly industrial improvement of economy can rise the demand of silver. Yet silver can be especially volatile, in part because the market for silver is smaller than that for gold²⁷.

²⁷ Reeves, J. (2010). *Five alternatives to gold*. [online] MarketWatch. Available at: <http://www.marketwatch.com/story/five-alternatives-to-gold-2010-10-08> [Accessed 21 Jan. 2015].

Platinum

Platinum is in many aspects very similar to gold and silver. It is metal that has many uses and also is beautiful enough to be used for jewellery. Firstly platinum actually comes in bars and coins just like gold and silver does. Supply of platinum is more similar to silver than gold, because 80% comes from mining and only 20% from recycling. However if we look on demand of platinum, 40% comes from auto catalyst, 20% is industrial and another 20% is jewellery. This means that when consumers that spending more, there will be an increase in demand. This adds even more similarity to silver. On the other hand if we look at prices, platinum is much closer to gold, actually it has often been slightly more expensive than gold itself. There have been some exceptions like in 2008 when price of platinum was actually double the price of gold. However currently platinum is actually slightly cheaper than gold. When investing into platinum besides, bars and coins there is again the possibility of investing into exchange-traded funds²⁸.

Palladium

The last metal that will be mentioned here is Palladium. Palladium is actually quite similar to platinum and silver when looked at supply. That is because most of it come from mining, around 70%, and the rest basically comes from recycling which accounts for 30%. Demand of palladium is ruled by automotive industry that accounts for 70% of all demand, the second one is actually electronics. This makes palladium very similar to platinum and since car demand is increasing every year, so is the demand for palladium. Not only because that, but since the global tightening of emissions standards, there is also an increase in palladium demand inside of automotive industry. This makes it very safe in terms of investing. Currently price of palladium sits around 775 dollar per ounce, which makes it more expensive than silver, however still cheaper than gold and platinum²⁹.

²⁸ Hess, A. (2014). *Five Unusual Alternatives to Investing in Gold*. [online] 247wallst.com. Available at: <http://247wallst.com/special-report/2014/02/03/five-great-alternatives-to-investing-in-gold/> [Accessed 24 Jan. 2015].

²⁹ Reeves, J. (2010). *Five alternatives to gold*. [online] MarketWatch. Available at: <http://www.marketwatch.com/story/five-alternatives-to-gold-2010-10-08> [Accessed 21 Jan. 2015].

3.8.2 Other Alternatives

It is only natural that when looking for gold alternatives, first thing that crosses one's mind are other metals. However what are other options for investment?

Energy commodities

There are many energy commodities, but the most widely used are crude oil, coal and natural gas. Those commodities have one disadvantage to metals and that is they are not recyclable but also not renewable. This means that all of the supply comes only from production. Demand for those commodities is mainly dependant on the size of the market and other economics factors. Still though they are to some extent similarly influenced by the US dollar. Thanks to that crude oil, natural gas and coal have become attractive gold investment alternatives. There are many possibilities how to invest into such commodities like options, futures, funds and equities however probably the easiest and most liquid way to invest into them are ETFs. These commodities have one really big advantage, which makes that vital to our society. There are no other reliable options in terms of usage and therefore they will be demanded until they are exhausted or replaced³⁰.

Land

Land has many great features, which make it great as an investment. First there is not infinite amount of land that can be bought, which means that land is actually scarce. Also since the growth of cities, suburbs and farmland is rapid, the amount of world's supply of land is quickly decreases. Actually the amount of arable land per person has been reduced in the past 40 years by half. Land has served like above mentioned commodities as a hedge against inflation. This only adds to the fact that land has been very popular investment for the ones that can afford buying it. This raises a question if there are enough

³⁰ Burgess, L. (2010). *Five Gold Investment Alternatives*. [online] Wealtdaily.com. Available at: <http://www.wealtdaily.com/articles/five-gold-investment-alternatives/2811> [Accessed 27 Jan. 2015].

opportunities to repay the investment. That is because land does not make any profit on its own, which means, it either has to be sold further or made into farmland. This means that before investing into land, it is wise to review the potential categories of that land. Those can be:

- Residential development land
- Commercial development land
- Row crop land
- Livestock raising land
- Timberland
- Mineral production land
- Vegetable farm land
- Vineyards
- Orchards
- Recreational land

After the decision what kind of land to buy, it is much easier to determine its potential value and also, naturally what to do with it³¹.

Timber

This one may be somewhat surprising to be on this list, however timber market has been steadily growing for 15 years. Once inefficient market, is constantly evolving, which leads to creating more opportunities for investing and allocation of capital. It may be surprising, but timber has some hedging characteristics against inflation. As a result of rapidly growing demand, the price of timber grows as well. Naturally since there are many kinds of wood, their prices vary as well. Once again one of the best ways to invest into timber are ETFs which are relatively new to the market. Since timber serves not only as

³¹ Adkins, T. (2014). *There Are More Ways To Invest In Land Than You Think (USAG,DIRT,LSTK,CUT)*. [online] Investopedia. Available at: <http://www.investopedia.com/articles/investing/050614/there-are-more-ways-invest-land-you-think.asp> [Accessed 30 Jan. 2015].

inflation hedge but also as a great portfolio diversifier it makes a great investment. Not to mention that its returns are often equal to or better than other asset classes³².

³² Stammers, R. (2008). *Timber Investments Cut Down Portfolio Risk*. [online] Investopedia. Available at: <http://www.investopedia.com/articles/stocks/08/timber-investment.asp> [Accessed 30 Jan. 2015].

4 Analysis

4.1 Fundamental Analysis

It is a method used for evaluating certain security. It uses real data such as, economic, financial and other quantitative and qualitative factors to evaluate security's value. It examines anything and everything that can affect the security's value. In the end though, the aim of performing fundamental analysis is to produce value that can be compared with the security's current price and thus make a decision whether to buy or sell³³.

4.1.1 Gold Supply

Since gold is almost indestructible, essentially gold supply is increasing every year. Naturally it is not only thanks to that, but the gold that has been already mined does not disappear easily. It is estimated that at the end of 2013 there were around 177 000 tonnes of mined gold above ground. However since there is only limited amount of gold, there will eventually has to come time, when every last piece of it, will be mined. Naturally mining is not the only way of obtaining gold. The second way is all the gold that is in circulation or in hold of central banks (above ground gold). The third is probably the most important one, since it holds key to future of gold supply, it is gold recycling. Gold recycling has many great features. One of them is that by recycling gold there is no degradation of quality at all, which means that gold that has been mined thousand years ago can be recycled into gold of the same quality as the one that was mined yesterday³⁴.

Mine production has always been the most contributing factor for gold supply. It has never dropped below 50%, mostly even contributing between 60% and 70%, even though in recent years it is less in comparison to decades before, where mine production was even at 80% in year 1970. Naturally the second most contributing is gold recycling,

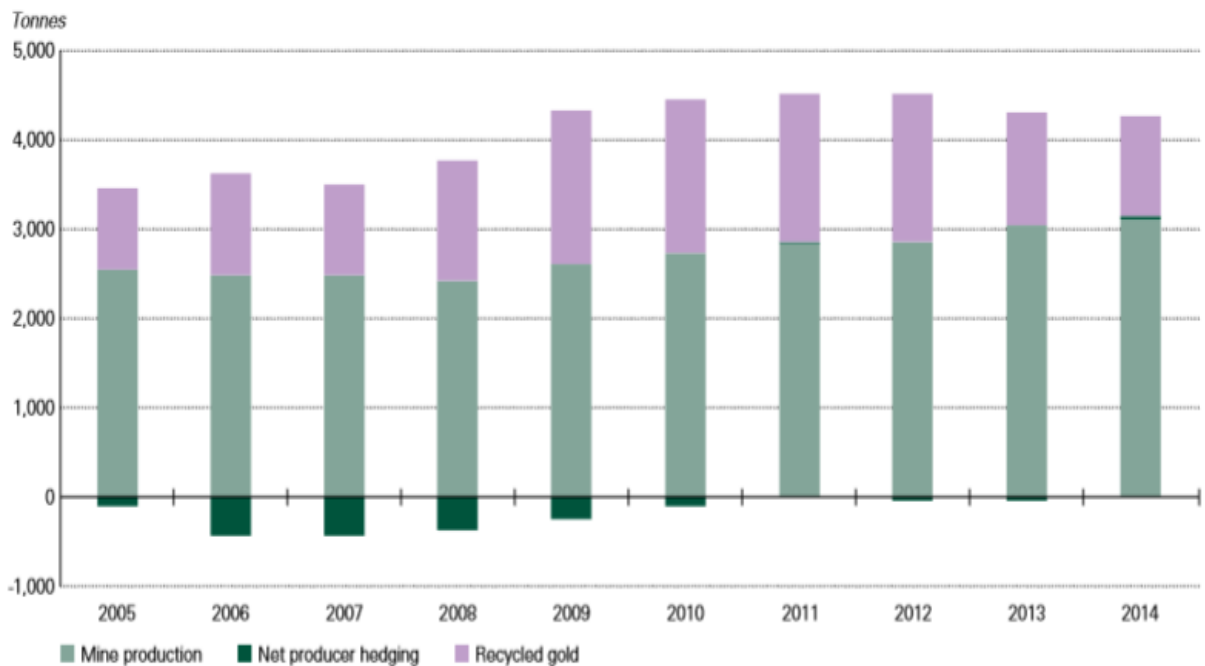
³³ Krantz, M. (2010). *Fundamental analysis for dummies*. Hoboken, N.J.: Wiley Pub.

³⁴ Fabozzi, F., Füss, R. and Kaiser, D. (2008). *The handbook of commodity investing*. Hoboken, N.J.: John Wiley & Sons.

which contributed mostly between 10 and 40 percentage. The rest was formed by net central bank sales, net producer hedging and disinvestment.

Nevertheless the recycling was in 2014 at lowest level since 2007 which resulted in overall lower gold supply not only in 2014 but also in most recent years. This meant that gold mining was in 2014 at 70% while recycling was at 29%.

Figure 2 - Gold Supply in Recent Years

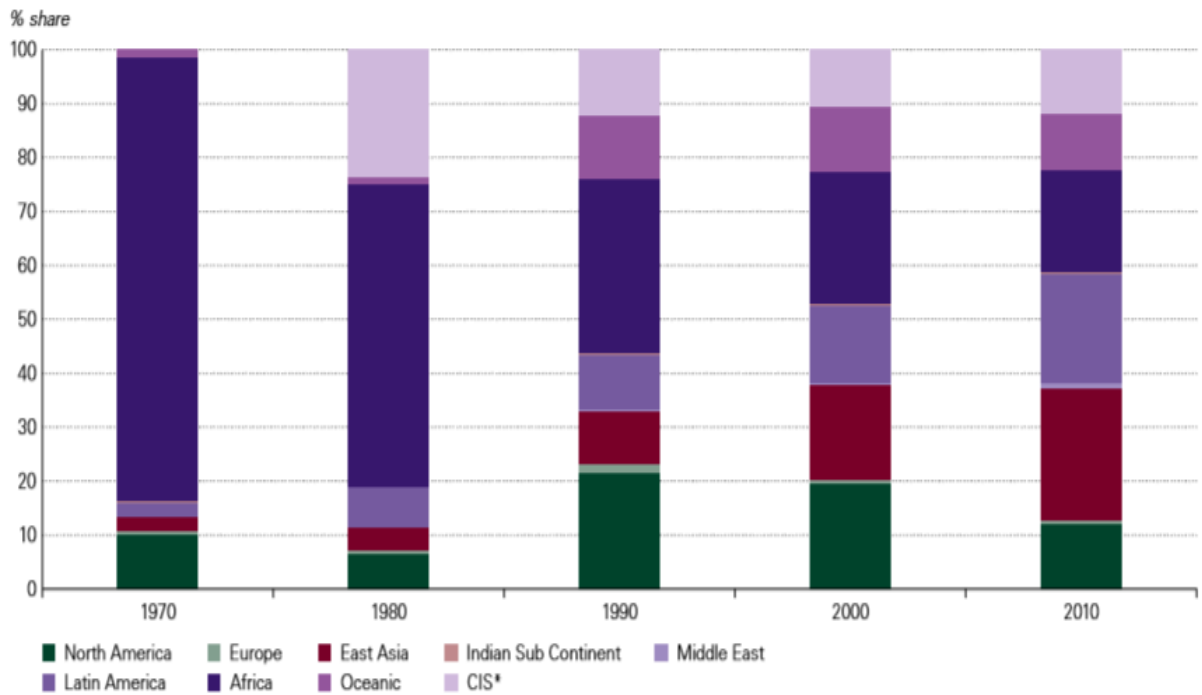


Source: Gold Demand Trends 2014. World Gold Council.

Since gold mining is the most important factor when it comes to supply, it is important to examine how the contribution changed geographically over the years. Gold mining production was historically dominated by South Africa which produced 79% of all gold in 1970. This was naturally by far the biggest contribution and it was actually even the peak of such dominance. After 1970 production of South Africa has continually decreased so much that today it is not even the top contributor. The market has underwent a great change and in 2010 China was the top producer with 13% followed by Australia with 10%, United States with 9%, Russia with 8% and South Africa also with 8%³⁵.

³⁵ The Evolving Structure of Gold Demand and Supply. (2011). 1st ed. [ebook] Available at: <http://www.gold.org> [Accessed 15 Feb. 2015].

Figure 3 - History of Gold Supply



Source: The Evolving Structure of Gold Demand and Supply, World Gold Council

4.1.1.1 Mine Production

Mine production has the biggest impact on gold supply in the world since it contributes currently for about 70%. In the several last years, mine production has always grown by few percent. In 2012 it was 2816 tonnes, in 2013 3050 tonnes and in 2014 3114 tonnes mined. Such growth is actually continuing from year 2008, when a small dip in mine production happened. There is average growth of 4,7% every year from 2008. However the growth in few last years is smaller dew to the fact that price of gold decreases which results in cutbacks in the development of new mining projects and rather focusing on cost cutting and rationalisation³⁶.

³⁶ Grubb, M. (2014). *Gold Demand Trends Full Year 2014*. [online] Gold.org. Available at: <http://www.gold.org/supply-and-demand/gold-demand-trends> [Accessed 5 Feb. 2015].

4.1.1.2 Recycled Gold

Even though gold recycling is the second most impactful factor on gold supply, it is currently experiencing a low point since it has been decreasing for few years already. In 2012 recycled gold was 1590 tonnes however in 2014 it was only 1121 tonnes which is actually quite a big difference. This means that in 2014 recycled gold was at the lowest level since 2008. As in the case of mine production, the decrease in recycled gold is mainly because the price of gold is decreasing³⁷.

4.1.1.3 Gold Demand

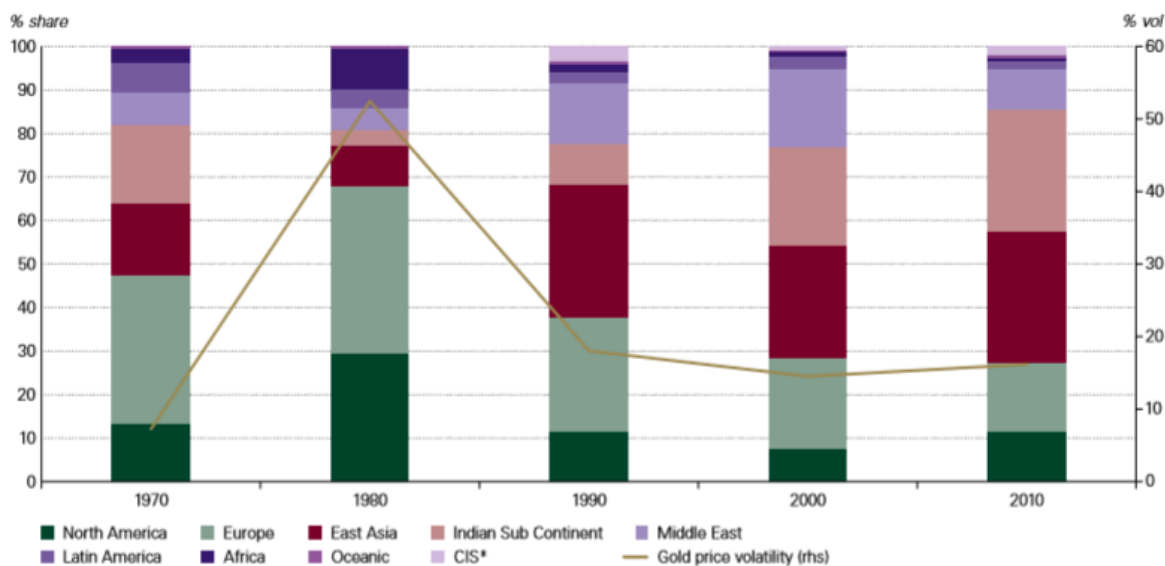
Gold demand had many different shifts in its history. Those shifts were not only across continents and time but also in its composition. In 1970 gold demand was led by Europe with 35% of global demand and together with North America it was 47%. Both these regions experienced a large increase of demand which resulted in 68% in 1980. Other regions had only a really small part in global demand. However after 1980 things radically changed, and it was time of East. While Europe and North America dropped to 38%, regions like East Asia and Indian Sub-continent shined. While these two regions had only about 35% in 1970, they quickly grew to a 58% in 2010. It is only natural that this growth had to be apparent elsewhere, and that Europe and North America, which dropped to mere 28% in 2010, so in a sense they switched roles with each other.

However geographical shifts were not the only ones, there were also shifts in demands categories. These categories are Jewellery, Technology and Investment. In 1970 there was big domination by Jewellery with 72%, followed by Technology with 16% and Investment with 12%. However then there was a big change in 1980 when Jewellery actually dropped to 38%, while Investment rose to 48% and Technology stayed about the same at 14%. This was a big exception as the demand was led by Investment and not by Jewellery. This however came back to normal in next decade, as Jewellery returned to its lead and even experienced another increasing afterwards. This meant that in 2000 Jewellery had a very big part with 82%, while Investment dropped to only 4% and

³⁷ Grubb, M. (2014). *Gold Demand Trends Full Year 2014*. [online] Gold.org. Available at: <http://www.gold.org/supply-and-demand/gold-demand-trends> [Accessed 5 Feb. 2015].

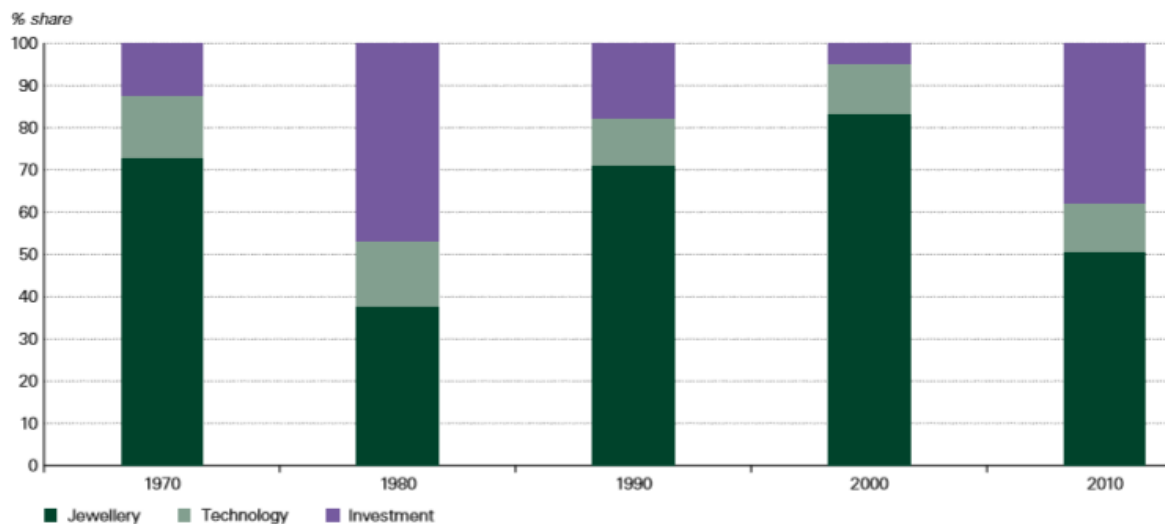
Technology still stayed around 14%. However there was another shock when Jewellery dropped again in 2010 to 50% and Investment rose to 48% and Technology with 12%³⁸.

Figure 4 - Distribution of Gold Demand by Region



Source: *The Evolving Structure of Gold Demand and Supply*, World Gold Council

Figure 5 - Distribution of Gold Demand by Category



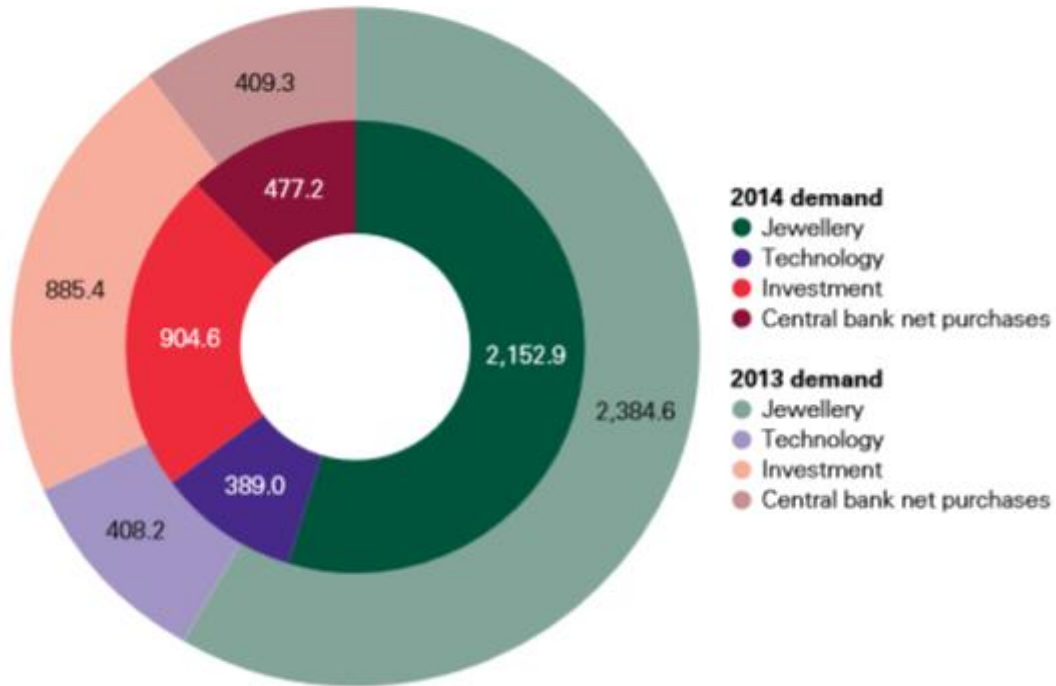
Source: *The Evolving Structure of Gold Demand and Supply*, World Gold Council

Now the most recent data will be looked at. In 2013 the whole demand was 4 087 of tonnes while in 2014 demand was down by 4% to 3923 tonnes. This decrease was

³⁸ The Evolving Structure of Gold Demand and Supply. (2011). 1st ed. [ebook] Available at: <http://www.gold.org> [Accessed 15 Feb. 2015].

actually not surprising since there was a big demand surge in 2013, and 2014 was expected not to be the same case.

Figure 6 - Gold Demand by Category in 2014 and 2013



Source: Gold Demand Trends 2014. World Gold Council.

4.1.1.4 Jewellery

Throughout the history jewellery demand was always in lead with few exceptions. There has been a big surge in demand in both China and India which are currently the top two in consumer demand respectively. Even though there was a big decrease in China's jewellery demand by 33% from previous year, it still remained first even by a just few tonnes. While demand in India rose by 8%. As well as the global demand, also the jewellery demand had suffered a small drop in 2014. This drop was from 2384 tonnes to 2152 tonnes which is a drop by 10%. Even though this drop was expected as 2013 was strong for jewellery, Indian gold demand actually hit a record of 662 tonnes in 2014. Naturally

some quarters are stronger than others when comes to demand. Typically the strongest are the last and first quarters, thanks to many celebrations taking place in this time³⁹.

4.1.1.5 Technology

Even though gold is very unique to technologies and therefore very important, Technology sector suffered a loss in demand and decreased by 4% from 408 tonnes to 389 tonnes. Every section of technology decreased, but the most notable is electronics which dropped to a 10-year low of 267 tonnes. This was caused by replacing gold with cheaper alternatives.

4.1.1.6 Investment

Investment demand was actually the only sector that did not suffer loss, but a small increase by 2%. The demand grew from 885 tonnes to 907 tonnes in 2014. Even though there was an increase, demand for coins and bars actually dropped by 40%, because 2014 cannot be compared with strength of demand in 2013. However the increase in Investment demand was driven mainly by slowdown in outflows. Gold is naturally very popular as investment thanks to its hedging features ability to lower risks.

4.2 Technical Analysis

Technical analysis is a methodology, which evaluates securities through statistics from market activities. It is used to forecast future prices and volumes by studying mainly past market data from previous years. This is done by using many different types of charts, to show the future activity. Basically technical analysis studies supply and demand in a market to determine its future direction or trend. Thanks to such analysis it is possible to make decisions whether to sell or buy. There are many different tools used in a technical analysis, which are used for its purposes. The ones used in this thesis are Simple Moving

³⁹ Grubb, M. (2014). *Gold Demand Trends Full Year 2014*. [online] Gold.org. Available at: <http://www.gold.org/supply-and-demand/gold-demand-trends> [Accessed 5 Feb. 2015].

Average (SMA), Exponential Moving Average (EMA), Moving Average Convergence Divergence (MACD), and Relative Strength Index (RSI)⁴⁰.

4.2.1 Simple Moving Average

Simple moving average is one of the most commonly used tools in technical analysis as well as one of the simplest ones. It is calculated by adding the closing price of the security for a number of time periods and then dividing this total by the number of time periods. It is mainly used to determine the trend direction. Such data can be used to make a decision whether to give buy or sell signals⁴¹.

This case was used with a 10 day moving average, since it is most reliable and also very common. When using simple moving average, the aim is to find whether the price is above or below this average. In the November 2014 price was way below moving average, which changed and until middle of December the price was actually above. Then a small drop appeared in which price was for 20 days below moving average. However after that a really steep rising appeared right on the brink of a new year, which lasted a month. After that came a fall with same slope in which the price was below average. There is no real pattern visible. When looking for a signal to buy, it is usually when both price and moving average are in an uptrend. Then it is a good time to buy on the next pullbacks. On the other hand signal to sell comes when both price and moving average is in a downtrend.

⁴⁰ Schwager, J. (1996). *Technical analysis*. New York: J. Wiley.

⁴¹ Investopedia, (2003). *Simple Moving Average (SMA) Definition | Investopedia*. [online] Available at: <http://www.investopedia.com/terms/s/sma.asp> [Accessed 12 Feb. 2015].

Figure 7 - Simple Moving Average



Source: own graph, Investing.com

4.2.2 Moving Average Crossover

Crossover method is a very common way for traders to use. It is a combination of two different simple moving averages one long term, one short term. In this case there is a 10 day moving average and 50 day average. In this method it is the position of both of moving averages that is important. The signal to buy is often when the short term moving average crosses the long term moving average and finds itself above it. The most notable example of this, as can be seen in figure 8 is after the New Year, when short term moving average rapidly goes above the long term moving average. This was a time to buy. At the end of January 2015, the short term moving average goes quickly down and eventually crosses the long term moving average, at which point it is a signal to sell.

Figure 8 - Crossover Method



Source: own graph, Investing.com

Result

As can be seen in Figures 7 and 8, both Simple Moving Average method and Moving Average Crossover method determined that currently it is suggested to sell gold.

4.2.3 Exponential Moving Average

Exponential Moving Average is another very common method in Technical Analysis. It is actually pretty similar to the Simple Moving Average except that it gives much more weight to the latest data. This means that since it weights current prices more heavily than past ones, it actually has better reaction time to price fluctuations than a

Simple Moving Average. However since it shows trends faster, there is also a possibility to show false signals⁴².

As can be seen in Figure 9 Exponential Moving Average is much quicker in reacting than Simple Moving Average. Even though that the result is often same since both averages are relatively close to each other, there can be seen fluctuations, which are not recorded by Simple Moving Average thanks to a very short duration of these. Those can be seen at the end of November 2014. Besides that however the current state is the same for both methods.

Figure 9 - Exponential Moving Average



Source: own graph, Investing.com

Result

⁴² Investopedia, (2006). *Technical Analysis: Moving Averages* | Investopedia. [online] Available at: <http://www.investopedia.com/university/technical/techanalysis9.asp> [Accessed 13 Feb. 2015].

Since price is below both Simple Moving Average and Exponential Moving Average it is suggested to sell gold.

4.2.4 Moving Average Convergence

Moving Average Convergence is another very popular method used in Technical analysis. This method is done by using one 12 day exponential moving average and one 26 day exponential moving average, which helps to measure momentum in the security. Then the longer term one is deducted from the shorter term one. This is plotted against a centreline, which is a point at which the two moving averages are equal. Then there is also plotted an exponential moving average of the MACD itself, which is usually a 9 day one. The MACD tries to measure short term momentum rather than a long term one, so it signals the current state of momentum. Besides those there is often a histogram, which shows the difference between the MACD and the 9 day exponential moving average. Slope of histogram shows how much of a momentum certain trend has, in either direction. Histogram has one very important feature, which is, that it shows in advance, changes in momentum, whether it is losing it or gaining it. Therefore it is great prediction tool.

Besides showing when to buy or sell, the MACD line also shows us, whether certain asset was overbought or oversold. This is shown by how far from the centreline the MACD line finds itself. Naturally if it is high above, it was oversold and if very below it was oversold⁴³.

In Figure 10 it is apparent that through whole January 2015 was a clear signal buy, as the MACD line is above the red signal line. At the end of January MACD line fell below signal line which suggests selling. Before that there was a really brief moment in December when it was suggested to sell. Even before that there was a signal to buy in November which came around middle of the month after another sell signal.

⁴³ Investopedia, (2003). *Moving Average Convergence Divergence (MACD) Definition | Investopedia*. [online] Available at: <http://www.investopedia.com/terms/m/macd.asp> [Accessed 14 Feb. 2015].

Figure 10 - Moving Average Convergence Divergence



Source: own graph, Investing.com

Result

Even though that MACD line is below signal line which suggests selling, since it is very small difference and there is apparent upward trend in histogram, it is very likely that a signal to buy will come in near future.

4.2.5 Relative Strength Index

Relative Strength Index is another well-known method used in Technical Analysis. This method is really good technical momentum indicator as it compares the magnitude of recent gains to recent losses. This is done to determine whether certain asset is overbought or oversold. RSI is calculated as $RSI = 100 - 100 / (1 + RS)$, where RS is average of x day's up closes/ average of x day's down closes. RSI has a range from 0 to 100, however the

most important values are 30 and 70. When RSI of an asset is close to 70, it is considered as overbought. On the other hand if it gets close to 30 it is seen as oversold⁴⁴.

Figure 11 - Relative Strength Index



Source: own graph, Investing.com

As can be seen in figure 11 gold was oversold for a short period of time on the beginning of November 2014 as it was below 30. When the RSI crossed the 30 line above, it gave the signal to buy. On the other hand gold was overbought in the middle of January 2015 for few days as it crossed the 70 line. However as the RSI crossed the 70 line below it gave the signal to sell.

⁴⁴ Investopedia, (2003). *Relative Strength Index (RSI) Definition* | Investopedia. [online] Available at: <http://www.investopedia.com/terms/r/rsi.asp> [Accessed 18 Feb. 2015].

Result

The price of gold is currently at 41 and trending downwards. If this trend will continue and cross the 30 line, gold will be oversold and it will be only a matter of time, when the trend goes back and will turn upwards. However currently it is still in a downtrend which tells us to sell.

5 Conclusion

This thesis showed that world of gold is very complicated and it is not an easy task to understand it all. It introduced gold from many different views from history to its current development. This was done by using various methods such as fundamental and technical analysis. While Fundamental analysis showed that even though there are naturally some movements in supply and demand, there are no real big changes in a short period of time on a global scale. However while supply sees just a very little changes over the course of history, demand has actually shifted across the continents. Current world gold demand stands on shoulders of two strongest, which are India and China as their demand was growing in last ten years, until actually last year when it experienced a decrease, especially China. Those two are so strong thanks to their very strong jewellery demand, which is actually more than 50% of whole world demand. Even still those two will definitely remain as the two top strongest countries in demand in near future. On the other hand they may not be able to sustain such a rapid increase in their demand, and will drop a little as suggest last year.

By using many different tools, that are used in technical analysis to predict future movement of price and also current trend, technical analysis shown that there was a big increase in price on the beginning of New Year, which however did not last long and after January it actually lost almost the same in next two months as it gained in January. Currently the price is still decreasing and as downtrend suggests this will continue even in the future, which means that it is currently suggested to sell gold. Gold price is currently around 1200 USD/oz, which historically is still high, but it is nowhere near the maximum price in 2011.

This means that if you want to invest into gold, currently is not a good time to do it as the price goes down. However for future options probably the easiest way to invest is to buy physical gold, in form of bullion coins. Also the best places to invest in are India and China which are currently very strong and also hold future of golds market.

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