

Risks and opportunities for the Swiss watch industry

Travail de Bachelor réalisé en vue de l'obtention du Bachelor HES

par :

Alexander Kenel

Conseiller au travail de Bachelor :

Cyril Pasche

Genève, 17.08.2018

Haute École de Gestion de Genève (HEG-GE)

Filière économie d'entreprise

Déclaration

Ce travail de Bachelor est réalisé dans le cadre de l'examen final de la Haute école de gestion de Genève, en vue de l'obtention du titre de Bachelor of Science en économie d'entreprise < ... >.

L'étudiant a envoyé ce document par email à l'adresse d'analyse remise par son conseiller au travail de Bachelor pour analyse par le logiciel de détection de plagiat URKUND.
<http://www.orkund.com/fr/student/392-orkund-faq>

L'étudiant accepte, le cas échéant, la clause de confidentialité. L'utilisation des conclusions et recommandations formulées dans le travail de Bachelor, sans préjuger de leur valeur, n'engage ni la responsabilité de l'auteur, ni celle du conseiller au travail de Bachelor, du juré et de la HEG.

« J'atteste avoir réalisé seul< e > le présent travail, sans avoir utilisé des sources autres que celles citées dans la bibliographie. »

Fait à Genève, le 13.08.2018

Alexander Kenel

Summary

In the first part of my bachelor thesis I am presenting the watch industry in Switzerland. My goal is to impart the most essential information to convey a good overview about this highly interesting domain. I am explaining the current state of the sector, but also important historical events like the quartz crisis from the 1970ies. Furthermore, there is an introduction to the most important Swiss watch companies, namely Swatch Group, Richemont, Rolex and LVMH. These four corporations have a total market share of almost 50% in the world. Moreover, there is a short explanation of how mechanical watches work and which attributes makes them so desirable.

In the second part of my bachelor thesis, I am analysing the most vital risks, but also opportunities for the watch sector. The Swiss watch industry is heavily export oriented and strongly dependent on the worldwide state of the economy. In years of crises, the watch industry suffers more than the average of industrial sectors. Vice versa, in years of economic prosperity, the Swiss watch industry delivers extraordinary results. A good economic development is therefore imperative for the success of the industry. Because of the high importance of external demand, I am analysing the most significant importing countries and regions for Swiss timepieces. I look into political, economic, socio-cultural and legal aspects that could influence the watch exports.

Another risk that is repeatedly stated by executives working in the watch industry is the overvalued Swiss franc. The strong Swiss franc is considered as one of the major risks for the watch industry. I examined if there is a directly observable correlation between the exchange rate of the Swiss franc and the watch exports. For that, I compared the exchange rate of the Swiss franc with the Hong Kong Dollar, US-Dollar, renminbi and euro. Afterwards, I compared if watch exports were higher if the Swiss franc was comparably weaker, respectively if exports suffered if the Swiss franc was strong.

My bachelor thesis ends with a conclusion, where I share my personal view and my thoughts about the development of the sector. My conclusion is made with the help of the information that I gathered for my bachelor thesis, as well as my subjective impressions and opinion on the matter.

Contents

Déclaration.....	1
Summary.....	2
Introduction	4
Mechanical watches.....	6
How a mechanical watch works	6
Characteristics of high-quality watches	7
Characteristics of the watch sector	10
Quartz crisis.....	10
Structure of the Swiss watch industry	12
Swatch Group	12
Compagnie Financière Richemont SA.....	13
Rolex SA	13
LVMH Moët Hennesy Louis Vuitton SA	14
Other companies	14
External risks.....	15
Markets for Swiss watches	17
Hong Kong.....	18
Political aspects	18
Economic aspects	20
Socio-cultural aspects.....	20
Legal aspects:	21
United States of America	22
Political aspects	22
Economic aspects	22
Socio-cultural aspects.....	23
Legal aspects	24
China	24
Political aspects	24
Economic Aspects	25
Socio-cultural aspects.....	26
Legal aspects	26
European market with focus on UK, Italy and Germany	27
Political aspects	27
Economic aspects	27
Socio-cultural aspects.....	28
Legal aspects	29
Risk of the strong Swiss franc.....	30
Conclusion.....	36
Bibliography	38

Introduction

Switzerland produces about 30 million watches each year and about 95% of them are exported to countries all around the globe (Gachet, 2012, p. 11). This represents about 2.5% of the worldwide production. At first glance this number seems deceptively small, after all, watches are among banks, chocolate and cheese what most people associate with Switzerland. However, if we look at the value produced, Switzerland is by far the most important watch manufacturer worldwide. The watches that are made in Switzerland represent about 50% of the total value that is produced globally. It is estimated, that 95% of all watches that are sold for more than 1'000 CHF are made in Switzerland. The average price of an exported Swiss watch was at 733 CHF in 2014. The two other nations that have high watch exports are Hong Kong and China. Their average price per watch exported was at 27 CHF respectively 7 CHF (Lincke, 2015, p. 7). This clearly shows Switzerland's dominant position in the market, particularly in the segment of upscale and luxury watches. These segments also generate the highest revenues in the industry. Of the ten Swiss watch companies with the highest turnover there is only Tissot which sells its watches in the mid-price range. The other nine brands (Rolex, Omega, Cartier, Longines, Patek Philippe, TagHeuer, Jaeger-LeCoultre, IWC and Audemars Piguet) all sell watches in the upscale or luxury segment. The Federation of the Swiss Watch Industry defines the upscale segment as watches sold from 500 to 3'000 CHF. A luxury watch is defined to have a sales price of more than 3'000 CHF.

In total, the watch industry generates about 1.5% of Switzerland's GDP. It is after the pharmaceutical- and mechanical engineering industry the third biggest export industry. An especially important market for Swiss watches is Asia. More than 50% of watch exports go to Asia (Federation of the Swiss watch industry). Most essential importer for Swiss watches is since 2008 Hong Kong. Hong Kong offers an easy customs clearance and they don't have taxes on luxury products or a value added tax. Therefore, it is common for Chinese tourists to buy Swiss luxury watches in Hong Kong. Additionally, a lot of watches that are exported to Hong Kong are reexported to other Asian countries. Consequently, Hong Kong takes function as an important distributor and Asian centre for Swiss watches.

Another important market is China. China continuously increases its importance as a market. From 2002 to 2012 the value exported to China increased by more than 46% each year (Gachet, 2012, p. 12). This extraordinary growth makes China one of the most important customers for Swiss watches.

Another important aspect is, that Chinese citizens not only import a lot of Swiss watches, they also buy Swiss timepieces in high quantities in other countries. Especially Hong Kong

is a popular destination to combine a holiday or business trip with the purchase of a Swiss luxury watch. But not only Hong Kong is a well-liked destination for the Chinese to buy Swiss watches: Of the 5% Swiss watches that are not exported to other countries, hence the watches for the domestic market, about 2/3 are sold to tourists (Gachet, 2012, p. 12). Especially important customers are Chinese citizens and most boutiques and retailers responded to their overproportional importance by hiring mandarin speaking staff. These reasons make China to one of the most important markets for watches and a lot of companies specifically focus on China. Whereas markets as Europe or the United States of America stagnate or moderately grow, the sales in China steadily increase and gain in importance.

Further, the sector employs around 59'000 people working in about 700 different companies (Federation of the Swiss watch industry). Important regions are the cantons of Berne, Geneva, Jura, Neuchâtel, Solothurn, and Vaud, where more than 90% of the added value is generated. One of the main reasons, that explains the dominance of the French speaking part of Switzerland in watchmaking is of historical nature. Huguenot refugees from France mainly have sought asylum in western Switzerland. This Huguenots brought a lot of knowhow and expertise about horology to Switzerland, this helped to establish western Switzerland as the centre of timekeeping already towards the end of the 18th century (Lincke, 2015, p. 4). Consequently, Switzerland is the leading nation in watchmaking for more than 100 years. In this time there were flourishing periods, but also times of recession or even crisis. There were some big reorganisations and the watch sector developed and evolved. Still, Switzerland could maintain its dominant position in watchmaking. Nevertheless, Switzerland's leading position is no law of nature and this privileged situation isn't self-evident. Therefore, for my Bachelor Thesis I have the ambitious aspiration to try to give a forecast for the development of the Swiss watch industry in the near future.

Because I have a special interest in luxury watchmaking, but also because of the overproportional importance of the luxury segment on the industry in a whole, I will especially focus on the segment of traditional mechanical upscale and luxury watches. In total, this segment generates about 85% of the turnover, even though only 20% of the exported watches are upscale or luxury watches (Gachet, 2012, p. 4). Nonetheless, it is of utmost importance to mention, that one of the key factors for Switzerland's great success in the watch industry is its diversification. The lower-priced and mid-priced segments generate the necessary volumes for an efficient production. Additionally, a lot of the customers that buy luxury watches, have bought more accessible Swiss watches first. So, the more affordable watches help to familiarise customers to Swiss watches and

help to build a loyal clientele. Further they make Switzerland's watches more visible. Because of these reasons it is evident, that also the lower priced watch segments contribute importantly to the great success of the watch industry.

Mechanical watches

How a mechanical watch works

Most watches are either driven by a mechanical or by a quartz movement. A mechanical movement consists usually out of at least the following six mechanisms. Evidently, for complications like a date function the movement becomes more complex.

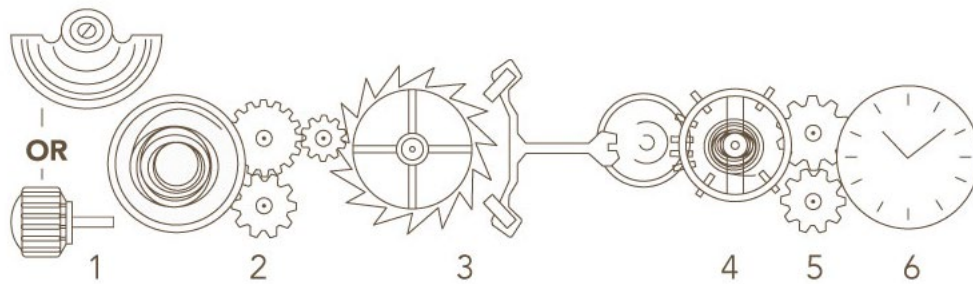


Figure 1: Construction of a mechanical movement

- 1) This is the **energy source** which powers the watch. In the image we can see that there are two options, and this is another distinction of mechanical watches. We have the automatic or self-winding mechanical watch and the manual wound mechanical watch. The self-winding mechanical watch is powered by a rotor (the semicircle above the crown). The wearer of the watch winds up his timepiece just with his body movements. When the wearer for example moves his wrist to grab a cup of coffee the rotor starts to spin around its own axe. The rotor spinning around its own axe tightens the mainspring, which stores and transfers the energy. With a manual wound watch the mainspring is tightened by the manual winding of the crown.
- 2) The energy that is stored in the mainspring is transferred to the rest of the watch through the **gears** that we see at number 2.
- 3) The purpose of the **escapement** is to guarantee a constant rate of rotation of the gears. It releases energy in consistent intervals. Without the escapement the gears that we see in number 2 of the legend would turn too fast and all the energy that is provided through the energy source would be released at once. So, without the escapement we could imagine a watch that we wind up and the hands would turn around very fast and obviously inaccurate. Therefore, the escapement is important for the accuracy of the watch and the steady release of the energy.

- 4) The **oscillator or controller** that we see in number 4 is powered by the escapement wheel. The escapement wheel in number 3 rocks the balance wheel that we see in number 4.
- 5) The wheels that we see in number 5 are used for the **time indication**. The second, minute and hour hands are mounted on the corresponding wheels. On a wheel that turns exactly one time per minute the second hand is installed. On the wheel that turns once every hour, the minute hand is installed and on the wheel that turns once every 12 hours, the hour hand is installed.
- 6) Display of the installed **hands**.

Characteristics of high-quality watches

The vast majority of luxury watches is powered by a mechanical movement. Therefore, the movement type is often already a good indication for the price of a watch. Quartz movements are a lot cheaper to produce than mechanical movements. Hence, most low-priced watches are driven by a quartz movement whereas the upscale and luxury segment consist out of mostly mechanical watches. The average price of an exported mechanical watch was at 2'147 CHF in 2011. For a quartz watch the average price was at 207 CHF (Gachet, 2012, p. 9). This illustrates well the connection between the movement type and price of a watch.

A big movement manufacturer is the Swatch Group subsidiary ETA SA. ETA SA delivers most watch producers of mechanical watches in the mid-price and upscale range. These movements are due to the voluminous production with its average price of 200 CHF a lot cheaper for *établisseurs* (companies which assemble watches but other than the manufactures don't produce all the components for their watches themselves) than the development and production of their own movement. These ETA movements are of high quality and even used for luxury watches at times.

Other factors that decide the price of the watch are the history and the reputation of the watch brand. A rich and consistent history of the company can make a huge difference regarding the desirability and therefore the price of a certain watch brand. A good example for that is Rolex. Rolex is a favourite among watch enthusiasts and they belong to the watch brands which hold their resale value best. Rolex was able to create a product line of truly iconic watches. Most of their models already exist since decades and their design was only slightly and carefully modified over the years. Example for that is one of Rolex's evergreen, the dive watch Rolex Submariner. In [Figure 2] we can see the first edition of the Submariner which was released in 1953 and a contemporary one in [Figure 3].



Figure 2: Rolex Submariner
from 1953



Figure 3: Contemporary Rolex
Submariner

It is easily noticeable that there were only minor changes in the design of the watch in its about 70 years of existence. This is a characteristic that a lot of popular watches share. Often, they were the first time released decades ago and due to their timeless design, they are still well-liked today. Other examples for these evergreens are the Omega Speedmaster “Moonwatch”, Audemars Piguet Royal Oak, Patek Philippe Nautilus or the Jaeger LeCoultre Reverso, to just name some of them.

Besides the reputation and the historical richness of a brand, there is also the capability of the company to produce their watches mostly in-house that counts. For watches in the upscale and luxury segment it is often seen as negative if they don't produce important components of the watch, like the movement, within the company. This trend is relatively young, and it induced various companies like Breitling to start developing their own movements. Prior to that, Breitling, as many others, mainly used ETA movements, which are accessible and of high quality. However, a lot of customers started to demand for watches with a movement that is produced in-house. Due to this demands Breitling saw itself compelled to develop an in-house movement. This is expensive and requires a lot of know-how. The development of a movement takes years of time and costs tens of millions of Swiss francs (Gachet, 2012, p. 27). This trend to in-house produced watches heavily increased prices in the whole upscale and luxury segment. As an example, there is the Breitling Navitimer which can be bought either with an in-house movement or an ETA-movement. The watch is the same with uniquely the movement that changes. The price for the ETA-based watch is 6'200 CHF and 8'350 CHF for the watch with the B01 Calibre that was developed by Breitling. But not only Breitling decided to offer watches

with in-house movements, also other popular watch brands like IWC and Tudor started to develop their own movements in recent years. Like already mentioned is the reason for that due to the demand of their customers, but also because Swatch Group, the mother company of ETA SA, wanted to stop delivering such a high amount of movements to competitors. This decision of Swatch Group was approved by the Competition Commission of Switzerland. There is a transition period and Swatch Group is still obliged to deliver movements until 2019. In case of hardship Swatch Group remains obliged to deliver companies with ETA-movements. However, the unwillingness of Swatch Group to deliver competitors could also benefit other companies, like for example Sellita, which is another Swiss movement manufacturer. Further there is the possibility that watch companies start to look for new possibilities to get watch movements. An example for that is the recent partnership between Tudor and Breitling. Breitling delivers Tudor with its chronograph B01 movement and in exchange for that Tudor delivers Breitling with its three-hand MT5612 movement.

Another aspect that makes especially watches in the highest price ranges so expensive is the movement finishing. The movement is often considered as the most important part of the watch and a significant role in the haute horlogerie takes the movement finishing. The finishing of the movement can make up to 1/3 of the total price of a watch. For mainly aesthetic reasons every



Figure 4: A. Lange & Söhne Saxonía, praised for excellent movement finishing

single part of the watch movement is processed and embellished. Notorious for their great movement finishing are brands of the highest price classes like Patek Philippe, A. Lange & Söhne, Vacheron Constantin, Audemars Piguet and Breguet.

Another factor for the price point of a watch are its complications. There are very basic complications like a regular date function, but also highly sophisticated ones like a perpetual calendar. Essentially both of these complications will display the date on your watch, but with an important difference: The perpetual calendar also takes into

consideration shorter and longer months. Even leap years are considered. This makes it possible, that a watch with a perpetual calendar hypothetically can run for 400 years without having to reset the date. A regular mechanical watch with a date function usually has to be reset every two months because if a month only has 30 days it automatically jumps to 31 and the wearer has to adjust the date. This is also necessary in the month of February. Collectors and watch enthusiasts are willing to pay a high amount of money for complications like a perpetual calendar and others. The price for a watch with a perpetual calendar is often several ten thousand Swiss Francs (Federico talks watches, YouTube channel).

Another exclusive complication is a tourbillon. Especially known for their tourbillons is Breguet SA, a company held by Swatch Group. Breguet produces watches in the highest price range and persons like Napoléon Bonaparte, Winston Churchill or Marie Antoinette were customers of Breguet. A tourbillon essentially makes a watch more precise. The escapement and balance wheel are in a rotating cage. This balances out the effects of gravity and a higher accuracy can be attained. Watches with a tourbillon usually differ less than ± 1 second a day. This is extremely precise for an automatic watch and most quality watches vary a lot more. A chronometer certified watch can vary up to ± 6 seconds each day and still qualify for the predicate "chronometer certified".

Characteristics of the watch sector

Quartz crisis

Probably the biggest influence on the Swiss watch sector in recent history had the quartz crisis that lasted from 1970 until the middle of the 1980ies. During this time, Switzerland dramatically lost its leading position in watchmaking. Accessible Japanese quartz watches flooded the markets worldwide and they rapidly gained in popularity. Prior to the quartz crisis, Switzerland was similar to today, undisputed leader in watchmaking. Switzerland was focused to produce high quality mechanical watches and because of their reliability and high precision they were appreciated all around the globe.

It may surprise that the first quartz watch was produced in Switzerland. In 1967 the Centre Electronique Horloger in Neuchatel created this innovation for the first time (Gachet, 2012, p. 14). It is a little ironic, that this invention, that comes from Switzerland, almost brought down the Swiss watch sector. Unlike mechanical watches, quartz watches are powered by a battery. This makes them easy and cheap to produce. Additionally, a quartz watch is a lot more accurate than a mechanical watch. Switzerland continued to manufacture mechanical watches and neglected the innovation of quartz movements. This negligence enabled Japan to start to produce quartz watches in high volumes for a very accessible

price. The Japanese quartz watches were a lot cheaper and more accurate than the Swiss mechanical watches. Further there was a global crisis and the strong Swiss franc made it even more difficult to export watches.

Essential to understand the quartz crisis is, that a watch was not seen as a piece of jewellery or a lifestyle product like it is today. Today we have a time indication on the cell phone, hence a watch is not a necessity anymore if one wants to know the time. A watch is much more an accessory or a valued companion and piece of jewellery. Luxury watches often have a special value to their owner. They were maybe a gift from a loved one or a mark for an achieved milestone like the successful graduation from university or a promotion in the workplace. Such being the case, a (luxury) watch is usually more appreciated for emotional reasons than for its function as a timekeeper.

That was not the case in the 1970ies. A watch simply responded to the need to know the time. There was less emotional value to a watch and the way of thinking about timepieces was more pragmatic than today. A watch had to be reliable and precise. Consequently, mechanical watches were due to their inferior accuracy seen as less desirable and the sales argument of the great precision of Swiss watches lost its weight. Swiss watch companies then made the fatal decision to use quartz movements only for the more expensive watches and mechanical movements for watches that are more accessible. The clientele of Swiss watches shifted more and more towards Japanese quartz watches. An iconic movie scene that illustrates this perfectly is perpetuated in the James Bond movie "Octopussy", that was released in 1983. Usually the watch of James Bond was a Rolex Submariner, but in "Octopussy" we see him with a Japanese Seiko quartz watch. The message is clear: James Bond only has the best. He drives the best cars, he is classy and smart, a gentleman that is always surrounded by charming women - and he wears a Seiko watch. This interesting movie scene displays the huge success of the Japanese quartz watches in the 70ies and 80ies.

Due to the quartz crisis, 2/3 of the people working in the watch industry lost their job. Before the crisis, there were 90'000 people employed in this sector. In the 1980ies the number of people working in the watch industry was at around 30'000. Furthermore, 1'000 companies disappeared during this harsh time (Gachet, 2012, p. 14).

It was only towards the end of the 1980ies that the watch sector started to recover from the crisis. Important for that were the restructuring and rationalisation of the industry. The two biggest watch companies ASUAG (Allgemeine Schweizerische Uhrenindustrie AG) and SSIH (Société Suisse pour l'industrie Horlogère SA) merged in 1983. This company was named SMH (Société de microélectronique et d'horlogerie) and later on became the

Swatch Group. The production of the movements became centralised and ETA SA became vital movement supplier for the watch brands belonging to SMH. ETA delivered companies like Tissot, Longines and Omega with movements. Due to the higher number of movements produced by one central supplier the costs of production decreased, and the production processes could be organised more efficient. The brands could focus on marketing and distribution of their watches and the effortful movement production became obsolete. Important key person behind these rightsizings was Nicolas Hayek. Nicolas Hayek is often seen as one of the indispensable persons that made the Swiss watch industry competitive again. He also cleverly marketed the famous Swatch watch. Swatch watches are cheap quartz watches with usually a trendy design. The huge success of the Swatch watches allowed SMH, respectively Swatch Group (since 1998) to acquire more watch brands like Blancpain (1992), Breguet (1999) and Jaquet Droz (2000).

Another important factor that helped the Swiss watch industry in its recovery was the clever repositioning of Swiss watches in the world market. The marketing now geared towards selling a luxury item and the emotional aspect of a mechanical watch was more targeted than its functionality. This was a highly successful strategy and with the luxury boom in the beginning of the 2000's the watch exports skyrocketed (Gachet, 2012, p.19).

Structure of the Swiss watch industry

The watch industry in Switzerland is dominated by four major corporations, namely the Swatch Group (17%), Richemont (14.7%), Rolex (11.4%) and LVMH (4.5%). These four corporations make up for almost 50% of the global turnover generated with the sales of watches. As a comparison: The three biggest Japanese watch producers Seiko (3%), Citizen (4%) and Casio (2%) have a market share of less than 10% combined (Gachet, 2012, p. 13).

Swatch Group

The Swatch Group is the market leader. There are 19 watch brands that belong to the Swatch Group and a characteristic of the holding is, that they sell their watches in all the different price segments. They have for example Swatch, which is an important producer of accessible watches, Tissot in the mid-priced segment, Longines in the upscale segment, and Omega in the luxury segment. With this high diversity of products, the Swatch Group was able to generate a turnover of almost 8 billion CHF in 2017. The brands Tissot, Longines and Omega generate more than 1 billion CHF each. This is something very rare in the watch industry and besides these three brands, there is only Rolex and Patek Philippe which also generate more than 1 billion CHF a year.

Further, Swatch Group owns 19 other companies, which produce different parts for the watches like movements, bezels, sapphire crystals, cases, etc. Probably the best known of these companies is ETA SA. ETA produces its movements for brands within the Swatch Group like for example Tissot, Longines or Hamilton, but also for various watch producers that are not held by the Swatch Group.

Almost the whole turnover of Swatch Group is generated with the sales of watches. So, we can consider Swatch Group as a pure watch concern.

Compagnie Financière Richemont SA

The second biggest company in the industry is Richemont. Other than Swatch Group, Richemont is a holding of luxury brands in general. Their portfolio consists out of 19 brands. 13 of them produce watches, most as their core activity, but also some brands, like Montblanc, as a side activity. Other than Swatch Group, the watch brands of Richemont are all positioned in the upscale or luxury segment. Brands that belong to Richemont are for example the very prestigious watch manufacturer Vacheron Constantin from Geneva, Jaeger-LeCoultre, the German brand A. Lange & Söhne or IWC Schaffhausen, one of the few brands which is located in German-speaking Switzerland. In 2017 Richemont had a turnover of more than 12 billion CHF. This turnover is mainly generated with the sales of jewellery (more than 6 billion CHF) but also through the sales of watches (about 3 billion CHF). The rest is produced with clothing, perfumes, accessories, etc (Richemont annual report and accounts, 2017, p. 1)

Rolex SA

By far the most valuable watch manufacturer is Rolex SA. Rolex has a market share of more than 11%. This is an enormously high amount if we consider that there is only Tudor which also belongs to Rolex. Other than the other three major companies, Rolex generates its estimated turnover of 4.5 billion CHF almost entirely with the sales of Rolex watches. This makes Rolex the strongest single watch brand in the world. Tudor, the only other brand that belongs to Rolex, gains popularity steadily. Nevertheless, its importance to contribute to Rolex's turnover remains relatively modest. Bank Vontobel AG analyst René Weber estimates its turnover to be around 250 million CHF in 2013. Another characteristic of Rolex is its notorious discretion. Because Rolex is held by Hans Wilsdorf foundation, they are not obliged to share as much information as the other listed companies. Consequently, most of the numbers like turnover, watches produced, profit, etc. are estimations. The profits generated by Rolex are reinvested in the company. Surplus profit after the reinvestments has to be used for the funding of charitable purposes. This was the will of Rolex founder Hans Wilsdorf, who didn't have an heir to

inherit his company to. It is estimated that Rolex contributes around 100-150 million CHF each year for altruistic purposes (Wilsdorf, plus qu'un mécène une vraie machine à cash, 1 February 2018, Tribune de Genève).

LVMH Moët Hennesy Louis Vuitton SA

LVMH is the biggest luxury holding company in the world. They control 60 subsidiaries of which three are pure watch companies, explicitly Hublot, TagHeuer and Zenith. Further they also control Bulgari, an Italian luxury brand that owns the Neuchâtel based Bulgari Haute Horlogerie SA. Bulgari Haute Horlogerie SA employs approximately 500 workers and they manufacture luxury watches.

Other companies

Because of the high importance of these four companies it may surprise that

most companies operating in the watch industry are small and medium-sized. In total, companies with 250 employees or less make up 97% of all the businesses in the watch industry. More than half even employ less than 10 persons. However, more than half of the employees in the Swiss watch sector work for a big company. This is significantly more than the average of 30% for the rest of the Swiss industrial industry (Gachet, 2012, p. 7).

Another characteristic is that the Swiss watch industry is more volatile than other sectors. In economically good years they grow overproportional in comparison with the market in a whole. The drawback is that they also suffer more from recessions and crises than companies operating in other sectors. During the worldwide economic crisis in 2009 the sales of upscale and luxury watches shrunk by 23%. The sales of cheaper watches likewise decreased by 17%. Most resistant was the mid-priced segment, which dropped by 5%. In good years on the other hand, the watch industry is capable to deliver very satisfying results (Gachet, 2012, p. 15). The phenomenon of the volatile upscale and luxury segment can also be explained through an economist's definition of a luxury product: A luxury product is defined as a good, that has an overproportional increase in demand as income rises. Vice-versa, demand shrinks overproportional if income decreases. The demand for a luxury product is therefore elastic to income. In contrast to luxury goods are the necessity goods. A necessity good like for example medicaments, electricity, or certain type of groceries are very inelastic to income and demand is stable, regardless of an increasing or decreasing income.

Risks and opportunities for the industry

External risks

In 2017, Deloitte published a study about the Swiss watch industry. For this study they asked senior managers working in the watch industry about the biggest risks for the Swiss watch sector. The risk that preoccupies most senior managers is a lower demand for Swiss watches from foreign countries. 57% of the senior managers see that threat as a significant risk within the next 12 months. The second biggest risk for the industry is the strong Swiss franc. 48% of the senior managers attending the poll perceive our strong currency as a major risk. The other risks listed in the study are a decrease in demand for Swiss watches within Switzerland (39%), the application of the new “Swiss made” regulation (25%) as well as the threat of smartwatches (23%).

In the analysis of the risks, I especially focus on the hazard of a lower external demand and the strong Swiss franc.

The risk of a lower demand in the domestic market is less vital for the export-oriented watch industry. Only 5% of the watches produced in Switzerland are also determined for the domestic market. Certainly, the local market should not be neglected, nonetheless the exports of watches are considerably more important.

The new application of the “Swiss made” label is more seen as a threat in the lower priced segments. In the upscale and luxury segment, on which I principally focus, the new regulation is mainly seen as positive. The new Swiss made regulation that became applicable the 01.01.2017 (but with a transition period of two years), defines that 60% of the value of a watch has to be produced within Switzerland. Before this new regulation, only the added value of the movement had to be generated primarily in Switzerland. Cases, bracelets, crystals, etc. could have been produced in other countries without affecting the label “Swiss made”. The “Swiss made” label is highly profitable for companies and studies from the university of St. Gallen reveal that customers are willing to pay up to 100% more for a watch that carries the label “Swiss made”. Because most upscale and luxury watch manufacturers already produce a substantial part of the value added within Switzerland, the new regulation is generally welcomed. According to the study of Deloitte, 44% of senior managers identify the new regulation as positive, 36% perceive it as neutral and only 20% see it as negative. Oftentimes, this new regulation is seen as a chance to strengthen the “Swiss made” label by companies positioned in the upscale and luxury segment. Therefore, the portrayed problematic is not disconcerting to pricier segments.

The smartwatches are considered by 23% of senior managers as an important threat within the next 12 months. However, similarly to the “Swiss made” regulation, smartwatches are more a menace to lower priced watches. In the upscale and luxury segment these smartwatches are frequently even seen as an opportunity to gain more customers. Watch manufacturers hope that young people could due to smartwatches get used to wear a watch again. Hence, it is possible that people dive into the world of watches through the purchase of a smartwatch and later on upgrade to a traditional mechanical watch. Moreover, it is controversial, in how far a smartwatch can even be considered a watch. It is clear, that its primary function is not to display the time but much more functions as a substitute or supporting tool for the smartphone. Also, it is doubtful if upscale and luxury watches even compete with the smartwatches. Like mentioned earlier, most owners of a mechanical watch have a certain emotional link to their timepiece. Certainly, there are also people that have a certain bond to electronic devices, but the number is perhaps a lot less significant. Most customers of smartwatches buy them just for a limited period of time, whereas a mechanical watch can last for a lifetime or even longer. Therefore, my main focus in the analysis of the risks lays on external demand and the strong Swiss franc.

Markets for Swiss watches

	Country	Value in million CHF	Variation in comparison with 2016	Share of total exports
1	Hong Kong	2'524.7	+6.0%	15.84%
2	United States of America	2'050.1	-4.4%	12.86%
3	China	1'536.7	+18.8%	9.64%
4	United Kingdom	1'290.5	+7.0%	8.10%
5	Japan	1'229.4	-2.6%	7.71%
6	Italy	1'181.1	+0.0%	7.41%
7	Singapore	1'099.5	+8.5%	6.90%
8	Germany	1'077.6	-2.2%	6.76%
9	France	981.9	-0.4%	6.16%
10	United Arab Emirates	891.4	-3.5%	5.59%
11	South Korea	699.2	+5.6%	4.39%
12	Spain	447.3	+0.3%	2.81%
13	Saudi Arabia	325.1	-6.4%	2.04%
14	Taiwan	304.5	-11.9%	1.91%
15	Austria	299.1	-1.4%	1.88%

Figure 5: Most important markets for Swiss watches

Source: FEDERATION OF THE SWISS WATCH INDUSTRY. 2018. « Press release ». [PDF]. 30 January 2018 [viewed 25 July 2018]. Available from: URL http://www.fhs.swiss/pdf/communiqu_170112_a.pdf

[Figure 5] shows the most important markets for the Swiss watch sector. I will try to analyse the risks and opportunities of the three most weighty markets, explicitly Hong Kong, United States of America and China, as well as an analysis for the European market as a whole. My analysis method is inspired by the famous PEST analysis. PEST is an acronym and stands for the variables “political”, “economic”, “socio-cultural” and “technology”. However, because I try to give a forecast on the future sales of Swiss watches in the specific country, I decided to not analyse the variable “technology” but replace it with the variable “legislation”. This for the simple reason that legislation has much greater influence on the exports of watches than the variable “technology” has.

Tradition is more important in the watch industry than the implementation of modern technology. Especially in the upscale and luxury segment, striving for technological improvement is not always the way to go. Already a mechanical watch in itself is essentially an outdated tool. Mechanical watches are less accurate and more sensitive to shock, temperature, magnetism, etc. than quartz watches. Therefore, the importance in watchmaking is not necessarily to provide the best technological solution, but to respect traditions and promote craftsmanship. Innovation in watchmaking is therefore less vital than in other sectors. Thus, the only moderate importance of technology for the watch industry.

Legislation on the other hand can have great influence on the export of watches. Examples for legal aspects that impact the sales of Swiss watches are tariffs, Free Trade Agreements, policies like China's battle against corruption, etc.

Hong Kong

Political aspects

Hong Kong was for more than 150 years under British control. The territory was given back to China in 1997 and is governed under the device of "one country, two systems". Hong Kong enjoys a high level of autonomy and is considered a special administrative region of China.

Main focus of the authorities is to ensure the competitiveness of Hong Kong and strengthen its economy. Most policies target to promote economic prosperousness. Except the political efforts to solve the problem of the housing scarcity, social policies are typically of lesser priority to Hong Kong's government.

The public debts are at around 39% of Hong Kong's GDP (Economic and Trade information on Hong Kong, 2018), thus 132 billion US-Dollars. This is certainly a manageable public debt and inferior to the average government debt of 87.7% of countries located in the eurozone. Striking is also the fact that Hong Kong had budget surpluses for the last 14 years.

The tax system for private households is comparable to a flat tax, although it also has a slightly progressive character. For a chargeable income (income minus deductions) between 0 and 40'000 HKD the tax rate is 2%. For a chargeable income between 40'001 HKD and 80'000 HKD the rate increases to 7%. The maximum tax rate is at 17% for chargeable incomes that are above 120'001 HKD a year. This makes Hong Kong's tax system quite unique and it implements characteristics of a flat tax as well as a progressive tax. Duncan Black of Media matters for America says that Hong Kong's "flat tax" is better

described as a “alternative maximum tax”. Another definition is given by Alan Reynolds of the Cato Institute. He describes the tax system of Hong Kong as steeply progressive.

In 2018, important investments of more than 5 billion US-Dollars were spent on Hong Kong Science Park. About a quarter of that money is designated to fund research and tech companies for their research in various fields like artificial intelligence, robotic, biotechnology, etc. Hong Kong’s governance expects a positive influence on the economy due to these high investments.

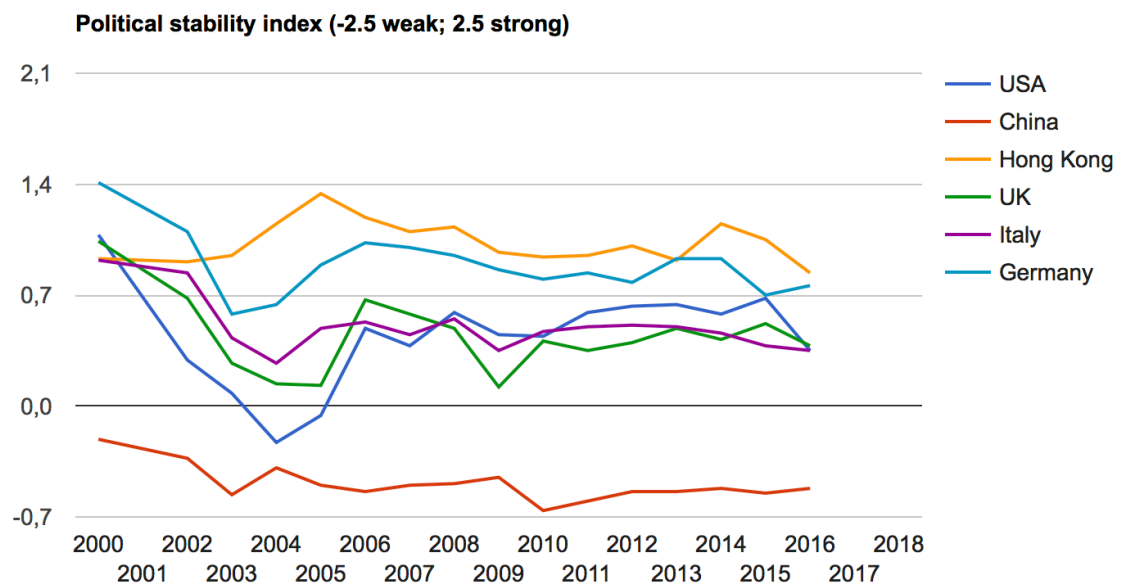


Figure 6: Political stability index

Source: THE GLOBAL ECONOMY, compare countries using data from official sources. 2018. [online]. [viewed 22 July 2018]. Available from: URL <https://www.theglobaleconomy.com/compare-countries/>

« Definition: The index of Political Stability and Absence of Violence/Terrorism measures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The index is an average of several other indexes from the Economist Intelligence Unit, the World Economic Forum, and the Political Risk Services, among others. »
(TheGlobalEconomy.com)

[Figure 6] displays the political stability of the three most important markets worldwide, as well as the three most important European markets for Swiss watches. The highest possible stability is defined as 2.5 and the lowest possible stability -2.5. In the six markets compared, Hong Kong is with 0.84 points ranked as the country with the highest political stability. Second most stable country is Germany with 0.76 points. The UK, Italy and

United States of America are evaluated to have a similar degree of political stability of around 0.35-0.38 points. TheGlobalEconomy ranks China with -0.52 points as the clearly least secure country in regards of political stability.

Economic aspects

Hong Kong is classified as the country with the highest economic freedom in the world (Heritage, 2018, ranking). Businesses profit from various advantages like a relatively low tax rate of 16.5%. Additionally, there are no capital gain taxes, value added taxes or taxes on luxury goods. Combined with the proximity to Chinese mainland, these benefits are decisive for many businesses to settle in Hong Kong.

The GDP of Hong Kong was at 341.45 billion US-Dollars in 2017. This equals to 46'200 US-Dollars of generated value per person. More than 92% of the GDP is generated in the tertiary sector, this makes Hong Kong the most service-oriented economy in the world. Especially important is the financial sector. Hong Kong is considered as the third biggest financial centre in the world, right after London and New York.

The forecast for the real GDP growth in 2018 is at 3-4%. This forecast seems probable, in the first quarter of 2018 the annualised growth would be at 4.7%, compared to 3.4% in 2017. The seasonally adjusted unemployment rate is on a 20-year low of 2.8%.

The retail sales jumped by 14.3% between January and March 2018. The strongest increase of 23.1% was made with the sales of jewellery, watches and other valuable gifts. According to Retail Management Association, businesses in Hong Kong could even sell goods for more than 63.3 billion US-Dollars and therefore break their record that was set in 2013. Highly important for the revenue generated in retail are Chinese tourists. These tourists buy a high amount of luxury products, like watches, jewellery, bags, etc. Of all the watches that are sold in Hong Kong around 80-90% are bought by Chinese citizens. In 2017 these tourist dollars made up for more than 11% of Hong Kong's GDP (Banta, 2015).

The economic situation in Hong Kong is very satisfying at the moment. Forecasts predict a strong economic year. Therefore, it is very likely that the sales of Swiss luxury watches increase again in 2018.

Socio-cultural aspects

The ethnicity of Hong Kong's population is to 95% Chinese and 5% others. The average life expectancy for women in Hong Kong is at 87.66 years, respectively 81.7 years for men. This is one of the highest life expectancies worldwide (Japan trails Hong Kong in latest life expectancy rankings, Japantimes).

In 2017 the Gini coefficient of Hong Kong rose to 0.539 for household income. A Gini coefficient of 0 means that everybody earns exactly the same income, whereas a coefficient of 1 signifies that one person earns all the income. A Gini coefficient of 0.539 indicates a relative high level of inequality. Hong Kong makes part of the quartile of countries with the highest Gini coefficient worldwide. Likewise, it is the most unequal country in Asia in regards of income.

Hong Kong's population is highly educated. In the Programme for International Student Assessment tests (PISA test) from 2015, Hong Kong's 15-year olds performed second best worldwide. Only Singaporean teenagers were able to achieve a higher total score. The PISA test evaluates the level of students in three different disciplines, namely mathematics, science and reading. Hong Kong's youth could especially shine in mathematics (2. Place) and reading (1. Place). In science they are the 9th strongest performing nation. In total there were 71 countries participating in the PISA test of 2015. The test is conducted in an interval of 3 years, hence in 2018 a new one will be carried out.

This high level of education can certainly have a very positive influence on the development of Hong Kong as a country. Education and know-how are probably the most important resources a country can have. Therefore, it is very plausible that Hong Kong can hold its strong position or even ameliorate it in the future. For the sales of luxury items, a flourishing and economically strong country with a wealthy population is very advantageous. In regards of education, Hong Kong surely is on a good path to maintain its relevance and wealth. This is obviously not a guarantee for important sales of luxury watches in the future, but a possible indicator.

A survey conducted by Agility Research & Strategy reveals that traveling is of higher importance than the consumption of luxury goods for Hongkongers. Especially popular are cruises or trips to Europe. Also, the acquisition of a house is of high importance for a lot of people. However, the purchase of a luxury watch still has high relevance for many residents. A watch is together with a car the most desired material object for Hong Kong's population (Banta, 2015). Even though materialistic things remain relevant, a shift of consumption habits away from objects towards experiences can be observed.

Legal aspects:

Due to the high level of economic freedom, exports of watches to Hong Kong are uncomplicated. There are no taxes on watches and therefore the prices of Swiss luxury watches are lower than in most other countries. Hong Kong sticks to its liberal economic policies and a change of law to make the exports more effortful is unlikely.

United States of America

Political aspects

American politics are dominated by two major parties, the republicans and the democrats. The legislative of the country is built by the congress, which consist out of the Senate and the House of Representatives. The executive is under control of the US-president and highest instance for jurisdiction is the Supreme Court.

In 2016 the government debts of the United States were at 99.45% of its GDP. The budget of the government in 2019 is set at 4,4 trillion US-Dollars. Extraordinary high is the budget for military spending. The budget for the military is at 886 billion US-Dollars and by far the highest expense for defence in the world.

Predominantly discussed in medias are the US politics, and especially Donald Trump. There is probably not a single day without a new article somehow related to the controversial president. The election of Donald Trump as president of the United States brought more uncertainty and scepticism to the world. The political stability is thus a little lower than in other years and the US-market more uncertain. The US-market is also the most concerning market worldwide to senior managers working in the Swiss watch industry. 50% of the managers that participated in the survey perceive the level of uncertainty as high (Zobrist Luc, 2017, p. 16).

Economic aspects

The United States of America has the biggest economy in the world. Its GDP was at 19.3 trillion US-Dollars in 2017. The economy of the United States of America is highly diversified, and they generate their GDP in various industries. Very important for the country is for example the tech industry which is mostly located in the Silicon Valley in California. Globally leading companies like Apple, Google, Tesla, HP, Intel and many others have their headquarters in the Silicon Valley. New York is especially known for its strong financial industry which is located in the notorious Wall Street in Manhattan. The financial and insurance industry generates about 8% of the USA's GDP. Maybe a little surprising is that most money is generated with real estate. Around 13% of the GDP is created in this sector.

In 2018 the economy is flourishing so far. The US-Dollar appreciated strongly in value and the US stock market is around all-time highs. The good state of the stock market can partly be explained by the low interest rates and Donald Trump's tax cuts. However, according to the International Monetary Fund the tax cuts could backfire in the future. Possibly the higher fiscal deficits will slower economic growth starting from 2022. The

good current state of the economy is also reflected by the low unemployment rate. In May 2018 the unemployment rate was at 3.8%. This is the lowest rate in the last 18 years.

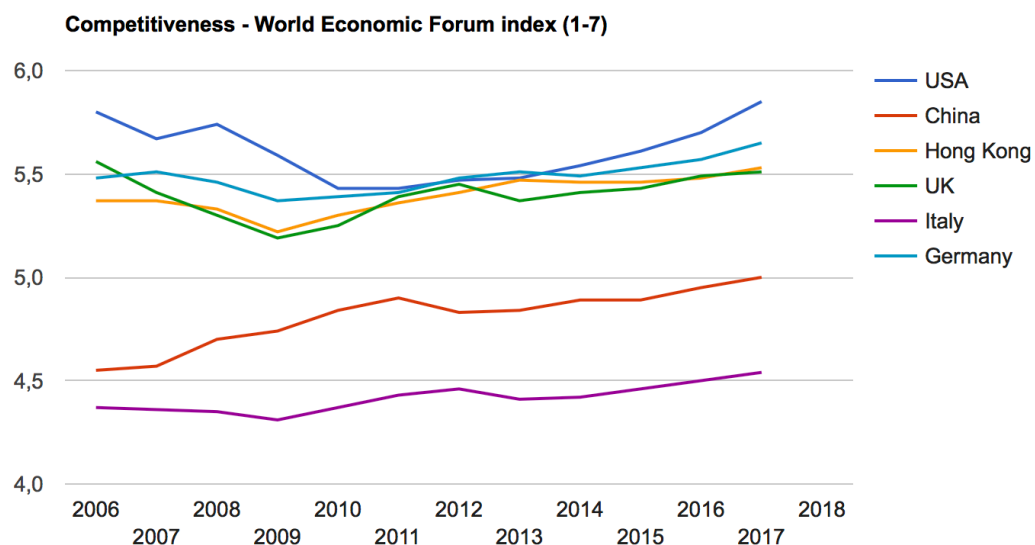


Figure 7: Competitiveness WEF index

Source: THE GLOBAL ECONOMY, compare countries using data from official sources. 2018. [online]. [viewed 22 July 2018]. Available from: URL <https://www.theglobaleconomy.com/compare-countries/>

« *Definition: The Global Competitiveness index is composed of 12 pillars of competitiveness. The pillars are organized as followed: Basic requirements (Institutions, Infrastructure, Macroeconomic Stability, Health and Primary Education); Efficiency enhancers (Higher Education and Training, Goods Market Efficiency, Labour Market Efficiency, Financial Market Sophistication, Technological Readiness, Market Size), and Innovation and sophistication factors (Business Sophistication, Innovation). »*
(TheGlobalEconomy.com and World Economic Forum)

[Figure 7] reveals that the USA was the most competitive country in comparison with China, Hong Kong, UK, Italy and Germany. The USA has 5.85 of possible 7 points. This is an important indicator for a possibly favourable development of the US economy. Second most competitive country is Germany with a score of 5.65 points. Bottom-placed in regards of competitiveness is Italy with a score of 4.54 out of 7 points.

A possible concern in the US economy is the inflation rate of 2.8%. This is the highest rate in the last 6 years and a possible indicator for a slowly overheating economy. Another issue is, that wages only grew by 2.7%, therefore employees have due to the inflation rate of 2.8% an expected real wage growth of -0.1% in 2018.

Socio-cultural aspects

An important characteristic of the American society is the high income and wealth inequalities. The USA has the highest income disparities in the western world and their

Gini coefficient was at around 0.48 in 2016. These inequalities can lead to tensions within a society and are a probable booster for crime.

These inequalities are also observed in the educational system. A good college education is very pricey in the USA. The high tuition fees are difficult to afford for many families. The imbalanced educational background of the US citizens can aggravate the unequal distribution of income even more. Nonetheless, the USA disposes of a high number of households that are wealthy enough to be potential customers for Swiss upscale and luxury watches. More than 17 million US-households have an income of 150'000 US-Dollars or more per year. This equals to 13.6% of the households. 15.4 million households have wealth of at least 1 million US-Dollars. This is an important number of people that have the necessary liquidity to spend money on luxury products. However, there is a concern that cannot be neglected. The number of wealthy people that intend to spend more money on luxury products is declining. In 2016, 31% of affluent US citizens planned to spend more money on luxury in the next year. This number decreased to 28% in 2017 and to 25% in 2018. Therefore, it seems that there is a trend to spend less money on luxury goods (Danziger, 2018).

Legal aspects

Even though Donald Trump was menacing various countries with trade barriers like tariffs, the possibility for a new Free Trade Agreement with the USA exists. The conservative Heritage foundation wants to establish a simple, mutually benefitting Free Trade Agreement with Switzerland. The Heritage foundation is very close to president Donald Trump and since his presidency, hundreds of Heritage members were integrated in the US government to execute important functions. Therefore, the influence of the Heritage foundation is considerable and the implementation of the Free Trade Agreement likely.

China

Political aspects

China has a one-party system. The only party existing is the Communist Party of China (CPC), which is in power since 1949. This makes the CPC the longest ruling party worldwide. Opposition and the creation of other political parties is prevented and complicated by the government. China is therefore not a democratic country. The CPC and the government are strongly linked to each other. The president of China is at the same time the general secretary of the CPC. The rank that somebody has within the CPC correlates to the position that one has in the government. High ranked members of the CPC usually also execute the most important functions in the administration of the government. Important decisions are in general made by the CPC and not the government.

The government debt is at around 44% of its GDP. Similar to Hong Kong, this is a manageable public debt and not an important concern.

A widely discussed subject is the monetary policy of China. The People's Bank of China (China's central bank) artificially devaluated the renminbi in the past. By devaluating the renminbi, Chinese products became cheaper and therefore more competitive in comparison with goods from other countries. This monetary policy was often criticised by other nations and the artificial devaluation of a currency is frequently seen as an unfair practice. In 2018 the yuan appreciated against many currencies like the Australian dollar, British pound, euro, Korean won and Japanese yen. Because of that, it is likely, that the People's Bank of China has no interest in devaluating the yuan in 2018. A devaluation of the renminbi is also unfavourable to China's long-term goal: The opening of the financial markets and the strengthening and elevating of the yuan as an important international currency (Nee Lee, 2018). For the Swiss watch industry this is good news. Because it is unlikely that the Chinese central bank devaluates the renminbi, Swiss watches are more accessible to Chinese citizens. A stronger yuan makes Swiss watches cheaper to import, hence a higher sales number can be expected.

Economic Aspects

China is the second biggest economy in the world. With its GDP of 12.2 trillion US-Dollars there is only the United States of America with an even higher GDP. About 50% of the GDP is generated with services, roughly 40% in the secondary sector and a little less than 10% in the primary sector. The GDP per capita is at 7'329 US-Dollars. Even though China's GDP per capita is still below the world average of approximately 10'200 US-Dollars, they have each year considerable growth rates. In 2008 China's GDP per capita was 3'805 US-Dollars. Therefore, they were able to almost double their GDP per capita within 9 years. The global average increased from 9'374 US-Dollars to about 10'200, hence a growth remarkably inferior to China's. It is likewise noteworthy, that there is a big discrepancy in the GDP per capita between different regions of China. Whereas cities like Beijing and Shanghai generate a GDP per capita of around 20'000 US-Dollars, provinces like Gansu or Yunnan are around 5'000 US-Dollars. However, the GDP per capita is growing in all regions of China, solely Inner Mongolia had a decrease of 15.7% in 2017 (Barbones, 2018).

The total debts of China are at around 249% of its GDP. This is very high, and the risk of a major crisis is present. Debts of around 250% of a countries GDP seem to be very difficult to manage and countries like Japan or the United States had a similar level of excessive indebtedness before they faced their major crises. In China's case the

composition of the debt is rather unique. Whereas government and household debts are low at 44%, respectively 39% of its GDP the corporate debts are at 166%! The corporate debts are mainly bonds issued by corporations and sold to banks. In the end of 2017 the four biggest Chinese banks held bonds worth around 4.1 trillion yuan. These high corporate debts could be a potential risk for the Swiss watch industry. Many watch companies rely strongly on China and if there is an important economic crisis it influences the success of the Swiss watch industry tremendously.

Socio-cultural aspects

Even though China's government is communist, the income inequalities are relatively high. The Gini coefficient of China is at 0.46. Income is distributed more unequal than in most other countries around the world. However, in tendency the Gini coefficient of China was decreasing in the last 9 years. Therefore, it is possible, that China shifts towards a more equal distribution of income in the future. For the watch industry, it is of course advantageous, if a large part of a society has enough disposable income to purchase a timepiece.

A watch is extremely important for most of Chinese citizens. This is proven by the fact, that China is such an important market for Swiss watches, but also the high importance of Chinese customers for Swiss watches in other countries, such as Hong Kong. According to a survey made by Agility Research & Strategy, a watch is the most desired object by Chinese people. The Chinese rather spend their money on a watch than other goods like a car, house, clothes, jewellery, etc. A watch is also of higher importance to most Chinese than traveling or other experiences. This is a very promising trait of the Chinese society and a big opportunity for the Swiss watch sector.

Legal aspects

A very significant influence on the sales of Swiss watches and other luxury goods had the battle against corruption that started in 2012. Luxury watches were popular gifts that were used to bribe government officials and other people of status. With the new procedure against corruption, more than 100'000 people were arrested since 2012. The strict approach to fight corruption in China made a lot of Chinese residents more careful, and less luxury products were bought. The Swiss watch industry suffered especially in 2016 and exports decreased. In 2016 exports to China and Hong Kong shrunk due to the strict anti-corruption approach by 22%. In total, Swiss watch sales dropped by 10% in comparison with 2015 (Federation of the Swiss watch industry).

Other important legal aspects are the China-Switzerland Free Trade Agreement that was signed in 2013 by Federal Council Johann Schneider-Ammann and the Chinese Minister

of Commerce Chen Deming. The agreement seeks to reduce or even remove tariffs on traded goods between China and Switzerland. Another advantage of the agreement is, that intellectual property rights are better protected under the new FTA.

European market with focus on UK, Italy and Germany

Political aspects

The three most important European markets for Swiss watches are probably quite heterogenous and do not have a lot in common. However, politically speaking we can observe more uncertainty than usual in all the three countries. There is the UK with its Brexit vote and the still unclear continuation of the execution for this decision. Italy with low political stability that makes headlines for allegedly unlawful deportation of refugees to Libya as well as Germany with the uprising political party Alternative für Deutschland (AFD). The uprising of the right-wing party is insofar problematic because it complicates the social cohesion and a lot of German citizens fear right wing parties due to their National Socialist past. With the establishing of the AFD the long-lasting premise that there is no democratic party right from the CSU lost its validity.

Economic aspects

The economy of the UK and Italy is expected to grow less than the average of the other European countries. Due to the Brexit, lower foreign direct investment is expected in the next few years. Additionally, it is likely that there are higher barriers of trade for the UK because they will not be a member of the European Union anymore. The estimated economic growth of the UK is at 1.6% for 2018, this is considerably lower than the 2.3% average for countries located in the Eurozone. Before the vote for Brexit, the UK always had an above average economic growth, whereas now they are located at the bottom in comparison with other European countries.

Italy is battling with a relatively low political stability and high government debts of around 132% of its GDP. This is a potential risk which is also displayed in Italy's credit ranking. Standard & Poor's rates Italy with BBB. This means that under normal circumstances Italy is seen as creditworthy, but that in difficult economic conditions it could become problematic for Italy to meet its responsibilities as a creditor. Further Italy is classified as comparatively corrupt. Transparency.org attributes 50 out of 100 points to Italy, where 100 points signify that a country is completely free from corruption. The average in western Europe is at 66 points.

The German Institute for Economic Research lowered their expectations for Germany's economic growth for 2018. Whereas originally the forecast for economic growth was at 2.4% for 2018 they adjusted their forecast to an economic growth of 1.9% for 2018.

Reasons for that are Italy with its concerning level of indebtedness and the tensions with the United States. Still, Germany's economy is in a good state and unemployment rates are low at 5.2% with a tendency to decrease even more in the next year.

All in all, Europe is dominated by more uncertainty than usual and it is possible that watch sales to Europe could decrease in the near future.

Socio-cultural aspects

Watches are very important for Italian people. That also explains the high importance of Italy as a market. Even though, Italy has not a very big population, nor an over average level of income, they import watches that are worth more than 1.1 billion CHF. This is more than Germany imports, even though Germany has higher salaries as well as a bigger population. In Italian culture appearance is of very high importance. They like to spend money on luxury clothes and enjoy being well-dressed. A high-quality watch is for many Italians therefore a very important accessory to display their good taste.

The UK is the most important European market for Swiss watches. British people are generally more on the hedonistic side and they enjoy spending money on quality and luxury products. UK's population has a household saving rate of -1.11% in 2016. Other nations like Germany (9.69%) or France (8.16%) save a lot more of their money. This shows, that the UK people tend to prefer to spend their money instead of saving it. This is understandably a good trait of the UK people for the potential sales of watches.

Legal aspects

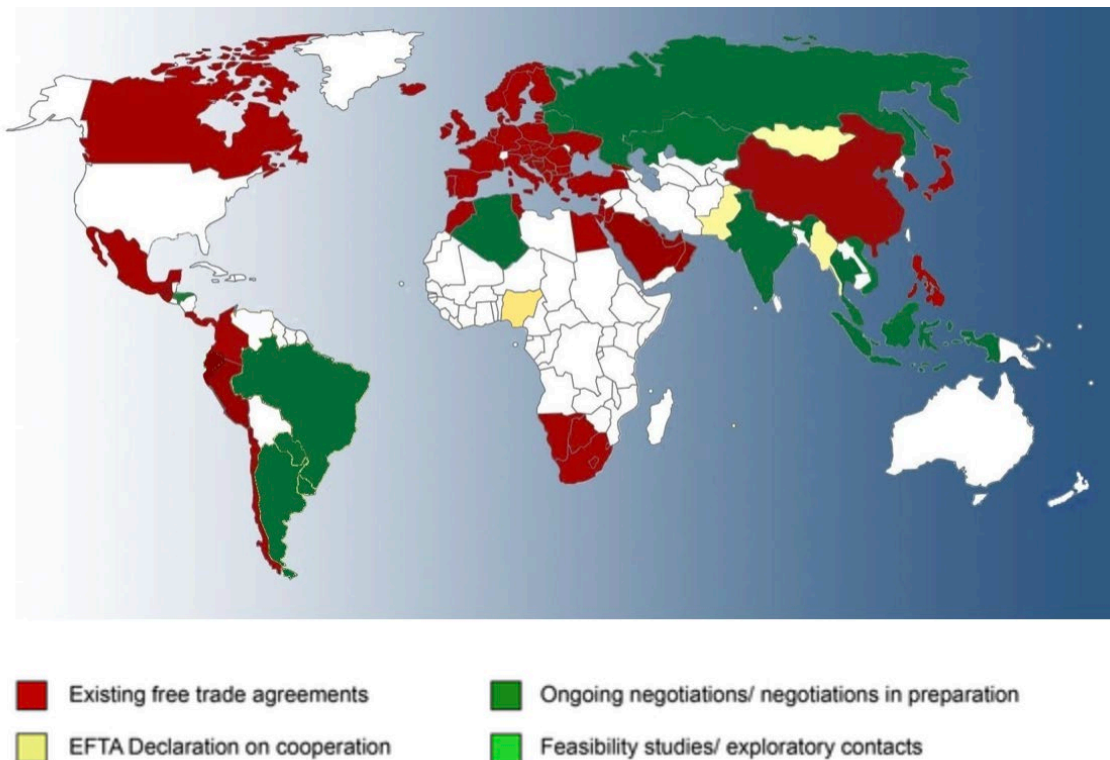


Figure 8: Free trade agreements of Switzerland

Source: STATE SECRETARIAT FOR ECONOMIC AFFAIRS SECO, 2018. « Free Trade Agreements ». *Seco.admin* [online]. [viewed 5 June 2018]. Available from: URL https://www.seco.admin.ch/seco/en/home/Aussenwirtschaftspolitik_Wirtschaftliche_Zusammenarbeit/Wirtschaftsbeziehungen/Freihandelsabkommen.html

Very important for the exports of Swiss watches to Europe are free trade agreements with the European Union. These free trade agreements exist since long time and tariffs or quotas on industrial products like watches were reduced or even abolished. [Figure 8] shows all the countries that we have a free trade agreement with in red. It is noticeable, that Switzerland has a Free Trade Agreement with all the European countries.

Risk of the strong Swiss franc

According to the study executed by Deloitte, the strong Swiss franc is a concerning risk to a majority of senior managers working in the watch industry. The overvalued Swiss franc is a major obstacle for exporting industries. Products coming from Switzerland are due to high overhead costs already very expensive. In combination with a strong Swiss franc the export of goods can become very challenging for export-oriented industries such as the watch sector.

A current example that illustrates the problematic is Swatch Group. In the first semester of 2018 Swatch Group was able to set a new record high in revenue for the first six months of a year. They were able to generate a turnover of 4.27 billion CHF. The profit of Swatch Group increased likewise, however, due to the strong Swiss franc, Swatch Group has not generated the highest profits in the first semester of 2018, even though revenue was the highest. This is due to the circumstance that Swatch Group sells many of its watches in self-owned boutiques and stores in foreign countries. The customer pays the watch in his local currency and the prices of the watches are not adjusted to the exchange rate. So, if a watch costs 1'000 euro, the price in the boutique for this specific timepiece remains 1'000 euro, regardless if the exchange rate is at 1.20 CHF per euro or 1.10 CHF per euro. This difference of the exchange rate is at the cost of the profit margin. Therefore, it is possible that revenue increases proportionally more than the profit.

A possibility to at least partially protect themselves from the risk of the fluctuating exchange rates is hedging. The big watch companies could hedge the currency risk with various instruments like for example a currency option. However, hedging is also linked to higher costs. Therefore, this could be more interesting for the smaller companies. The big companies in the watch industry are probably strong enough to carry the risk of the fluctuating exchange rates themselves.

Additionally, we have to distinguish, that there are two main forms for the retail of watches. There are the boutiques or flagship stores that are owned by the watch companies themselves and there are the official retailers that are delivered by the watch companies. In case of the boutiques, a watch is considered as sold only as soon as a customer buys it. With the official retailers this is different: The watches that are delivered to an official retailer are immediately considered as sold. This even though a watch could stay for years in a shop without anyone buying it. Therefore, watch sales can appear to be higher than they actually are. This can be problematic, especially if some watches are not sold at all. Vacheron Constantin for example recently bought back many unsold watches of official

retailers. This mainly to avoid, that watches are sold with a discount, which would hurt the image of a luxury brand.

In my analysis underneath, I try to find out, if it is possible to see a direct correlation between the exchange rate of a certain currency and the watch exports to the corresponding country. Obviously, the exchange rate is not the only factor that influences the exports of Swiss watches. There are other important factors like the state of the economy in general, changing consumption habits of the population, etc.



Figure 9: Exchange rate HKD to CHF

Source: XE Corporation, 2018, HDK to CHF chart [viewed 2 August 2018]. Available from: URL <https://www.xe.com/currencycharts/?from=HKD&to=CHF&view=5Y>

In [Figure 9] we see the exchange rate of the Swiss franc and Hong Kong Dollar. The y-axis represents how many Swiss francs we have to exchange for 1 Hong Kong Dollar at a determined period of time, which is indicated on the x-axis. The space between two red lines always corresponds to one year. Theoretically, in years where the Swiss franc was strong in comparison with the Hong Kong Dollar, exports to Hong Kong should have suffered. Vice versa, in years where the Hong Kong Dollar was strong, exports should have been high. Unfortunately, there is no data available for watch exports of the year 2014, therefore I will not be able to take 2014 into account for my analysis. The numbers used in my analysis are the official results published by the Federation of the Swiss watch industry.

The average exchange rate for 1 Hong Kong Dollar was at around 0.12 CHF for 2015, 2016 and 2017. Even though the exchange rate was very stable in average, the watch exports had big fluctuations. From 2015 to 2016 watch exports to Hong Kong decreased by 769,4 million CHF from a total of 3.179 billion CHF to 2.382 billion CHF. The reason for the decrease is mainly the lower demand for Swiss watches by Chinese people that were more cautious in the purchase of luxury products due to the battle against corruption by the Chinese government. In 2017 the demand rose again, and a total value of 2.520 billion CHF was exported to Hong Kong. Consequently, in the case of Hong Kong it is unfortunately not possible to see a direct correlation between the exchange rate and the watch exports.



Figure 10: Exchange rate USD to CHF

Source: XE Corporation, 2018, USD to CHF chart [viewed 2 August 2018]. Available from: URL <https://www.xe.com/currencycharts/?from=USD&to=CHF&view=5Y>

In [Figure 10] we see the exchange rate of the US-Dollar, the currency of the second biggest market, the United States of America. The average exchange rate of 2015 was at around 0.96 CHF for 1 US-Dollar. In 2016 the average rate for 1 US-Dollar was at 0.98 CHF. Therefore, the US-Dollar was slightly stronger in 2016 and watch exports to the United States of America should theoretically be higher in 2016 than in 2015. In reality, the watch exports in 2015 were with a total value of 2.359 billion CHF higher than in 2016 with 2.145 billion CHF. In 2017 the US-Dollar was in average as strong as in 2016 with 0.98 CHF per US-Dollar. In 2017 the watch exports to the USA decreased again to 2.049

billion CHF. Thus, in the case of the United States of America we cannot observe a direct correlation between the exchange rate and the watch exports in recent years either.



Figure 11: Exchange rate CNY to CHF

Source: XE Corporation, 2018, CNY to CHF chart [viewed 2 August 2018]. Available from: URL <https://www.xe.com/currencycharts/?from=CNY&to=CHF&view=5Y>

[Figure 11] shows the exchange rate of the Swiss franc and the Chinese renminbi. Like with the US-Dollar we see on the y-axis the number of Swiss francs that we have to pay for 1 yuan. In 2015, 2016 as well as 2017 the average exchange rate for 1 yuan was at around 0.15 CHF in average. Watch exports to China declined slightly from 1.336 billion CHF to 1.293 billion CHF and increased to 1.536 billion CHF in 2017. Therefore, the exchange rate was very similar for three years, although there were fluctuations in the sales.



Figure 12: Exchange rate EUR to CHF

Source: XE Corporation, 2018, EUR to CHF chart [viewed 2 August 2018]. Available from: [URL https://www.xe.com/currencycharts/?from=EUR&to=CHF&view=5Y](https://www.xe.com/currencycharts/?from=EUR&to=CHF&view=5Y)

Because of the particularity of 2014 with the huge decrease in value of the euro, I decided to look for more information about the watch sales of 2014 to European countries. 2014 is in so far special, because the Central Bank of Switzerland decided to abandon the minimum exchange rate of 1.20 CHF per Euro. Unfortunately, there are no indications of exact value that is exported in 2014, but in total there was a decline of -1.2% over the whole year. Whereas Germany and France had a decline of -6.4%, respectively -6.0%, the UK (2.3%), Italy (0.5%) and Spain (9.8%) increased their value imported. In 2015 the average exchange rate was at 1.06 CHF per euro. In 2016 the euro became slightly stronger and the exchange rate was at 1.09 CHF for each euro. In the same period of time the watch exports to the most important markets that use the euro as their currency decreased. In 2017 the euro became again stronger and the exchange rate was in average at 1.11 CHF for every euro. The watch exports to the most important markets (Germany, France and Italy) decreased slightly again. The watch exports of the UK were always growing in the same period of time. Nevertheless, the UK does not use the euro and they still employ the Pound Sterling as their national currency.

As a conclusion it was unfortunately not possible to illustrate a direct link with the exchange rate and the total value that is exported. Even though, the exchange rate is an important factor for the successful export of watches, other variables seem more central.

There is for example the prosperity of the economy in the importing countries that counts, consumption trends, in the case of China and Hong Kong also politics, etc.

Conclusion

The most important factor for the continuing success of the Swiss watch industry is external demand. It is crucial, that Swiss watches remain desirable objects and that the worldwide state of the economy is sufficiently favourable to furthermore allow enough people to purchase Swiss luxury watches. There are certainly some risks that could lower the demand for Swiss timepieces. The political landscape is changing faster and some unforeseen events like the election of Donald Trump, the Brexit vote, Germany's uprising AFD, etc. took place.

It also seems that there are more tensions on a global scale than a few years ago. There is the current conflict between the United States of America and Turkey, where both sides imposed punitive tariffs on each other's products. Additionally, the USA had disagreements with other countries like Iran, North Korea, Russia, China and Germany lately. This uncertainty and hostile atmosphere can perhaps inhibit a good development of the global economy. Likewise, within Europe there are more challenges to face: The solidarity between European countries seems weakened and there appears to be a trend to pursue more "national" politics, that especially try to promote the prosperousness of the own country, without focus on the good development of Europe in a whole. Especially the dealing with immigration becomes a crucial test for the European Union. Furthermore, the relationship between the European Union and Switzerland is more tensed. Popular votes like the Swiss immigration initiative from 2014 raised questions by the EU. Another problematic is the currently weak euro in comparison with the Swiss franc. All these factors can be potential problems for the successful development of the Swiss watch industry.

However, even though there are some risks for the Swiss watch sector, I see a lot more opportunities. The economic state of Europe and the United States is despite the political uncertainties improving. Unemployment rates are decreasing in most important markets for the Swiss watch sector. Stock prices are rising and there is also more inflation than in more recent years. These are good indicators for a healthy economy that is in a state of expansion. Asia, which is the most important market for Swiss watches, grows steadily. With a good development of Asia, it could even be possible to access new markets like India, Indonesia or the Philippines. These three countries dispose of a big population and a good development of the Asian economy could allow the watch industry to export more to these countries.

As the biggest opportunity for the Swiss watch industry I see the Chinese market. Chinese citizens are already the most important customers for Swiss watches, but there is still a lot of room for further growth. China is catching up to developed countries in a remarkable

speed. The average salary of a Chinese citizen in urban areas is still relatively low at around 10'000 CHF per year in 2016, but with the huge growth of China it is very likely that this number only goes up in the future. This was also the trend for more than 10 years now. Since 2006 the average salary of urban Chinese citizens has more than tripled (Statista). With this gigantic growth it seems very plausible that China becomes an even more important customer for Swiss timepieces. A very essential aspect is the high appreciation for watches by the Chinese. Like mentioned before, a watch is the most desirable object for Chinese people. They rather have a nice watch than a nice car and they even prefer a nice watch over holidays in a foreign country (Banta, 2015). This is an outstanding opportunity for the Swiss watch industry and they should do everything in their power to preserve the high significance of a watch in Chinese culture. If the high importance of a watch can be maintained in Chinese culture, I think that further growth in the market China is very likely. I believe that the Chinese will undertake a much more significant role in the world in the future. I assume, that China will take over the USA's leading position in the world. Further growth of wealth and salaries in China seem very plausible. With the resulting higher purchasing power of Chinese people, a bigger part of the population has access to luxury watches. Because of that, I see the development of China as the most crucial for the success of the Swiss watch industry.

On a global scale I personally have the feeling that the Swiss watch sector becomes even stronger in the future. I think that many more people will start to appreciate the charm of a mechanical watch. The influence of computers, smartphones and other electronic devices will only increase hereafter. Therefore, I assume, that an automatic watch can represent a certain link to tradition and craftsmanship and appeal to many people. Probably numerous individuals are interested and fascinated by things that can trigger a certain sentiment of nostalgia. We see that in an important trend for vintage products like vinyl turntables or old bicycles. This desire to escape at least partly from modern society's rapidity could also benefit the Swiss watch industry. No other industry conveys an image of tradition and continuity better than the Swiss watch sector. In a world where changes in one's personal situation can occur in a heartbeat, a mechanical watch can symbolise at least some stability and steadiness in one's life. Because of the reasons stated, I look very optimistic into the future of the Swiss watch industry.

Bibliography

AUTOMATIC WATCHES FOR MEN, 2018. « How does automatic watch work ». *automaticwatchesformen* [online]. [viewed 5 May 2018]. Available from: URL <https://automaticwatchesformen.com/how-does-automatic-watch-work>

Average annual salary of an employee in urban China from 2006 to 2016 (in yuan), *Statista.com* [online]. [viewed 4 August 2018]. Available from: URL <https://www.statista.com/statistics/278349/average-annual-salary-of-an-employee-in-china/>

BABONES, Salvatore, 2018. « China quietly releases 2017 provincial GDP figures ». *Forbes* [online] 12 February 2018. [viewed 12 July 2018]. Available from: URL <https://www.forbes.com/sites/salvatorebabones/2018/02/12/china-quietly-releases-2017-provincial-gdp-figures/#50bc506720dc>

BAKER, Neal, 2018. « Western expats are turning Hong Kong into a drug and sex-fuelled den of debauchery ». *news.com.au* [online] 2 January 2018. [viewed 3 July 2018]. Available from: URL <https://www.news.com.au/travel/world-travel/asia/western-expats-are-turning-hong-kong-into-a-drug-and-sexfuelled-den-of-debauchery/news-story/ba9a671f297171e144524884dd9502d1>

BANTA, Amrita, 2015. « Retail: What Differentiates Hong Kong & Chinese Luxury Shoppers? ». *Luxury Society* [online] 9 September 2015. [viewed 15 June 2018]. Available from: URL <https://www.luxurysociety.com/en/articles/2015/09/retail-what-differentiates-hong-kong-chinese-luxury-shoppers/>

BIRD, Mike, 2018. « Investors Worry About China Devaluing the Yuan, but the Currency is Rising ». *The Wall Street Journal* [online] 20 June 2018. [viewed 1 July 2018]. Available from: URL <https://www.wsj.com/articles/the-yuan-is-rising-as-investors-worry-about-devaluation-1529484280>

BLAND, Ben, 2017. « Hong Kong regains its appetite for Swiss watches ». *Financial Times* [online] 28 September 2017. [viewed 7 July 2018]. Available from: URL <https://www.ft.com/content/7338adca-8cc0-11e7-9580-c651950d3672>

BLOOMBERG, 2015. « Rolex Offshoot Brand Tudor Emerges as Threat to Midpriced Rivals ». *Business of Fashion* [online] 26 March 2015. [viewed 10 June 2018]. Available from: URL <https://www.businessoffashion.com/articles/news-analysis/rolex-offshoot-brand-tudor-emerges-threat-midpriced-rivals>

BUTTERY, James, 2017. « Start of a new movement – why Breitling and Tudor have teamed up ». *salonqp.com.au* [online] 28 April 2018. [viewed 18 September 2018]. Available from: URL <https://www.salonqp.com/updates/analysis/start-new-movement-breitling-tudor-teamed/>

CLIFFNOTES, 2018. « Politics in the United States ». *Cliffnotes* [online]. [viewed 5 July 2018]. Available from: URL <https://www.cliffsnotes.com/study-guides/sociology/economics-and-politics/politics-in-the-united-states>

COMMISCEO GLOBAL, 2018. « Hong Kong Guide: A Look at Language, Culture, Customs and Etiquette ». Commisceo Global [online]. [viewed 5 July 2018]. Available from: URL <https://www.commisceo-global.com/resources/country-guides/hong-kong-guide>

DANZIGER, Pamela, 2018. « American affluents plan to pull back on luxury spending—are luxury brands ready for this? ». *Forbes* [online] 24 May 2018. [viewed 7 July 2018]. Available from: URL <https://www.forbes.com/sites/pamdanziger/2018/05/24/the-thrill-is-gone-american-affluents-plan-to-pull-back-on-luxury-spending/>

Distribution of Gross domestic Product GDP across economic sectors in China, *Statista.com* [online]. [viewed 4 August 2018]. Available from: URL <https://www.statista.com/statistics/270325/distribution-of-gross-domestic-product-gdp-across-economic-sectors-in-china/>

Economic Freedom: Country ranking, *Heritage.org* [online]. [viewed 5 July 2018]. Available from: URL <https://www.heritage.org/index/ranking>

FEDERATION OF THE SWISS WATCH INDUSTRY. 2018. « Press release ». [PDF]. 30 January 2018 [viewed 25 July 2018]. Available from: URL http://www.fhs.swiss/pdf/communiqu_e_170112_a.pdf

FEDERATION OF THE SWISS WATCH INDUSTRY. 2017. « Die Lage der Uhrenindustrie 2016 in der Schweiz und Weltweit ». [PDF]. [viewed 26 July 2018]. Available from: URL http://www.fhs.swiss/file/59/Uhrenindustrie_2016.pdf

FEDERATION OF THE SWISS WATCH INDUSTRY. 2018. « Swiss watch exports by country ». [PDF]. [viewed 25 July 2018]. Available from: URL http://www.fhs.swiss/scripts/getstat.php?file=histo_pays_180606_a.pdf

FEDERATION OF THE SWISS WATCH INDUSTRY. 2015. « Swiss watch exports 2014 ». [online]. 3 February 2015 [viewed 27 July 2018]. Available from: URL http://www.fhs.swiss/eng/2015_02_03_statistics.html

FEDERICO TALKS WATCHES, *The Cheapest Swiss Perpetual Calendar Watches On The Market - Federico Talks Watches* [Video recording]. Youtube [online]. 6 March 2018. [viewed 22 July 2018] Available from: URL https://www.youtube.com/watch?v=_K3u6WXzpto

FISCHER, Peter, KUCHLMAYR, Ferdinand 2017. « Wie das politische System Chinas funktioniert ». *Neue Zürcher Zeitung* [video recording] 13 March 2018. [viewed 10 July 2018]. Available from: URL <https://www.nzz.ch/international/wie-das-politische-system-chinas-funktioniert-id.1323737>

FORSTER, Jack, 2018. « Jean-Claude Biver tells the Wall Street Journal why Swiss watches might be on borrowed time ». *Hodinkee* [online] 13 March 2018. [viewed 5 June 2018]. Available from: URL <https://www.hodinkee.com/articles/jean-claude-biver-wall-street-journal-swiss-watch-interview>

GACHET, Emilie, 2012, Schweizer Uhrenindustrie Erfolgsfaktoren und Herausforderungen Sonderstudie, *Credit Suisse Economic Research*, 29 August 2012 [viewed 3 February 2018]

GILES, Chris, 2018. « Brexit Britain slides down Europe's economic league table ». *Financial Times* [online] 17 April 2018. [viewed 5 August 2018]. Available from: URL <https://www.ft.com/content/4f4f022e-420a-11e8-803a-295c97e6fd0b>

THE GLOBAL ECONOMY, Compare countries using data from official sources. 2018. [online]. [viewed 22 July 2018]. Available from: URL <https://www.theglobaleconomy.com/compare-countries/>

GUY, Peter, 2018. « Hong Kong's Science Park just got the lion's share of the budget goodies, but on what basis? ». *South China Morning Post* [online] 4 March 2018. [viewed 25 June 2018]. Available from: URL <https://www.scmp.com/business/banking-finance/article/2135640/hong-kongs-science-park-just-got-lions-share-budget-goodies>

HONEGGER, Lorenz, 2018. « Welhalb US-Konservative Freihandel mit der Schweiz fordern – und das der EU schaden könnte ». *Watson* [online] 12 August 2018. [viewed 12 August 2018]. Available from: URL <https://www.watson.ch/schweiz/international/678625382-weshalb-us-konservative-freihandel-mit-der-schweiz-fordern-und-das-der-eu-schaden-koennte>

Hong Kong: Economic and Political outline, *Santander Trade* [online]. [viewed 5 July 2018]. Available from: URL <https://en.portal.santandertrade.com/analyse-markets/hong-kong/economic-political-outline>

Hong Kong Public Debt, *indexmundi* [online]. [viewed 7 July 2018]. Available from: URL https://www.indexmundi.com/hong_kong/public_debt.html

Hong Kong Tax Rates and Income Tax System, *Guide me Hong Kong* [online]. [viewed 10 July 2018]. Available from: URL <https://www.guidemehongkong.com/business-guides/supporting-a-business/hong-kong-tax-rates-and-income-tax-system>

HONG KONG TRADE DEVELOPMENT COUNCIL, 2018, Economic and Trade information on Hong Kong, *Hong Kong Economy Research HKTDC* [online]. [viewed 7 July 2018]. Available from: URL <http://hong-kong-economy-research.hktdc.com/business-news/article/Market-Environment/Economic-and-Trade-Information-on-Hong-Kong/etihk/en/1/1X000000/1X09OVUL.htm>

Household savings, *OECD data* [online]. [viewed 4 August 2018]. Available from: URL <https://data.oecd.org/hha/household-savings.htm>

JABERG, Samuel, NGUYEN, Duc-Quang. 2017. « Sechs Fakten über die Schweizer Uhrenindustrie ». *swissinfo.ch* [online] 22 March 2017. [viewed 17 June 2018]. Available from: URL https://www.swissinfo.ch/ger/wirtschaft/listicle_sechs-fakten-ueber-die-schweizer-uhrenindustrie/43031602

Japan trails Hong Kong in latest life expectancy rankings, *Japantimes* [online] 21 July 2018. [viewed 27 July 2018]. Available from: URL <https://www.japantimes.co.jp/news/2018/07/21/national/japanese-still-near-top-rankings-life-expectancy-2017-figures-show/#.W3RT1y3qh0t>

LEISINGER, Christof, 2018. « Die Nationalbank steckt wieder im Schwitzkasten ». *Neue Zürcher Zeitung* [online] 26 June 2018. [viewed 7 July 2018]. Available from: URL <https://www.nzz.ch/finanzen/die-nationalbank-steckt-wieder-im-schwitzkasten-id.1397446>

DR LINCKE, David-Michael, 2015, Thema des Monats: Uhrenindustrie, *Picard Angst*, December 2015 [viewed 10 February 2018]

Liste der Länder nach Einkommensverteilung, *Wikipedia* [online]. [viewed 9 July 2018]. Available from: URL https://de.wikipedia.org/wiki/Liste_der_Länder_nach_Einkommensverteilung

MARKS, Xavier, 2016. « A Technical Perspective – All you want to know about Finishing in Haute Horlogerie ». *Hodinkee* [online] 1 April 2016. [viewed 1 June 2018]. Available from: URL <https://monochrome-watches.com/a-technical-perspective-all-you-want-to-know-about-finishing-in-haute-horlogerie/>

NEE LEE, Yen, 2018. « China's monetary policy is complex and shifting. Here's what you need to know ». *CNBC* [online] 5 August 2018. [viewed 5 August 2018].

Available from: URL

<https://www.cnbc.com/2018/08/06/china-monetary-policy-how-pboc-controls-money-supply-interest-rate.html>

PISA-Studien: Ergebnis-Tabellen der, *Wikipedia* [online]. [viewed 9 July 2018]

Available from: URL

https://de.wikipedia.org/wiki/Ergebnis-Tabellen_der_PISA-Studien

PISA test results comparison by countries, *compareyourcountry.com* [online]. [viewed 27 July 2018]. Available from: URL

<http://www.compareyourcountry.org/pisa/country/hkg?lg=en>

RAU, Nils, 2017. « What are the five most expensive complications for luxury watches? ». *Chronext* [online] 2 June 2017 [viewed 5 June 2018]. Available from: URL

<https://www.chronext.com/journal/mechanics/what-are-the-five-most-expensive-complications-for-luxury-watches>

Revision of the Ordinance on the Use of "Swiss" for Watches, *Swiss Federal Institute for Intellectual Property* [online]. [viewed 2 June 2018].

Available from: URL

<https://www.ige.ch/en/law-and-policy/national-ip-law/indications-of-source/swiss-indications-of-source/industry-ordinances/revision-of-the-ordinance-on-the-use-of-swiss-for-watches.html>

RICHEMONT, 2017. « Annual Report and Accounts 2017 ». *Geschaeftsberichte-rating* [PDF]. [viewed 3 June 2018]. Available from: URL

https://www.geschaeftsberichte-rating.ch/fileadmin/user_upload/redakteure/rating-2017/pdf/GBR2017_AR_RICHEMONT.pdf

Schweizer Löhne weiterhin auf Platz 1 in Europa, *towerswatson.com* [online]. [viewed 27 July 2018]. Available from: URL

<https://www.towerswatson.com/de-CH/Press/2015/01/Schweizer-Lohne-weiterhin-auf-Platz-1-in-Europa>

Staatsverschuldung in der EU in Prozent des Bruttoinlandsprodukts, *Statista.com* [online]. [viewed 4 August 2018]. Available from: URL

<https://de.statista.com/statistik/daten/studie/163692/umfrage/staatsverschuldung-in-der-eu-in-prozent-des-bruttoinlandsprodukts/>

STATE SECRETARIAT FOR ECONOMIC AFFAIRS SECO, 2018. « Free Trade Agreements ». *Seco.admin* [online]. [viewed 5 June 2018]. Available from: URL

https://www.seco.admin.ch/seco/en/home/Aussenwirtschaftspolitik_Wirtschaftliche_Zusammenarbeit/Wirtschaftsbeziehungen/Freihandelsabkommen.html

Tourbillon, *Wikipedia* [online]. [viewed 9 July 2018]. Available from: URL
<https://en.wikipedia.org/wiki/Tourbillon>

TRADINGECONOMICS, 2018. « GDP United States ». *Trading economics* [online] [viewed 20 July 2018]. Available from: URL
<https://tradingeconomics.com/united-states/gdp>

TRADINGECONOMICS, 2018. « GDP China ». *Trading economics* [online] [viewed 20 July 2018]. Available from: URL
<https://tradingeconomics.com/china/gdp>

TRADINGECONOMICS, 2018. « GDP Hong Kong ». *Trading economics* [online] [viewed 20 July 2018]. Available from: URL
<https://tradingeconomics.com/hong-kong/gdp>

TRADINGECONOMICS, 2018. « Hong Kong Government Budget ». *Trading economics* [online] [viewed 20 July 2018]. Available from: URL
<https://tradingeconomics.com/hong-kong/government-budget>

TRADINGECONOMICS, 2018. « Hong Kong GDP per capita ». *Trading economics* [online] [viewed 20 July 2018]. Available from: URL
<https://tradingeconomics.com/hong-kong/gdp-per-capita>

WEBER, Rene, BERTSCHY, Jean-Philippe, WALDER, Ladina, Vontobel Luxury Goods Shop – watch industry, *Vontobel*, 14 April 2016 [viewed 4 May 2018]

Wettbewerbskommission, 2016, WEKO genehmigt stufenweisen Abbau der Lieferungen von mechanischen Uhrwerken [online]. [viewed 18 September 2018]. Available from: URL
<https://www.weko.admin.ch/weko/de/home/aktuell/medieninformationen/nsb-news.msg-id-50702.html>

« Wilsdorf, plus qu'un mécène, une vraie machine à cash ». *Tribune de Genève*, 1 February 2018. [viewed 2 February 2018].

WORLDATLAS, 2018. « The biggest industries in the United States ». *World Atlas* [online]. [viewed 5 August 2018]. Available from: URL
<https://www.worldatlas.com/articles/which-are-the-biggest-industries-in-the-united-states.html>

YIU, Pak, McINTYRE, Stefanie, 2017. « Hong Kong wealth gap at its widest in decades as handover anniversary nears ». *Reuters* [online] 27 June 2017. [viewed 10 July 2018]. Available from: URL
<https://www.reuters.com/article/us-hongkong-anniversary-wealth-gap/hong-kong-wealth-gap-at-its-widest-in-decades-as-handover-anniversary-nears-idUSKBN191E2>

ZEIT ONLINE, 2018. « Deutsche Wirtschaft wächst weniger als erwartet ». *Zeit online* [online] 13 June 2018. [viewed 12 August 2018]. Available from: URL <https://www.zeit.de/wirtschaft/2018-06/wirtschaftswachstum-deutschland-oekonomen-prognose-abnahme-korrektur>

ZEN, Soo, 2017. « 'Cash is king' mindset is halting Hong Kong's digital revolution, says top Google official ». *South China Morning Post* [online] 12 September 2017. [viewed 5 July 2018]. Available from: URL <https://www.scmp.com/business/companies/article/2110811/googles-hong-kong-sales-and-operations-chief-says-city-falling>

ZOBRIST, Luc, DR. GRAMPP, Michael, Etude Deloitte 2017 sur l'industrie horlogère Suisse, *Deloitte* [PDF]. [viewed 24 February 2018]. Available from: URL <https://www2.deloitte.com/content/dam/Deloitte/ch/Documents/consumer-business/ch-fr-swiss-watch-industry-study-2017.pdf>

MORVAN, Loïc, 2015. Luxury and consumer goods, *Bryan Garnier & Co*, 30. July 2015 [viewed 6 March 2018]