The Swiss Luxury Watchmaking Cluster

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Executive Summary

Switzerland is one of the most politically and economically stable countries in the world. Although its economy is very dependent on its neighbors, its GDP growth outperformed Europe in the past few years. Switzerland was ranked the most competitive country for 5 years in a row by the World Economic Forum, driven by its innovation and labor market efficiency. Productivity is increased with targeted training in-house or at specialized institutions. Additionally, the public sector is one of the most transparent in the world enhanced by an independent judicial system and a strong rule of law, all of which drive business confidence (WEF, 2013). Resulting from its strong national diamond, Switzerland is home to many clusters with some key ones being: Financial, Metal, Chemical, Electrical Machinery and Watchmaking.

Switzerland’s watch and clock industry started in the 16th century with the cluster development following a century later, mainly in the Jura region. It is the biggest exporter of watches in terms of value (CHF 21.4B in 2012 and 29.2 million units), while China is the biggest units exporter (662.5 million units). A long history of watchmaking, specialized training, supporting government policies (Swiss made, Swissness, Hallmark of Geneva) and linked industries such as precision engineering has made Switzerland a monopoly for luxury watches. Recent developments on the supply side and increased demand for luxury/mechanical watches have been catalysts for vertical integration of the value chain by the major players, increasing their know-how and competitiveness. For Switzerland to sustain its growth and its monopolistic position, it must ensure good trade agreements with its key markets (Asia, emerging markets and Mercosur states), an increase in educated workforce and competitive tax incentives.

1. Switzerland

1.1 Country Overview

Switzerland, officially named Swiss Confederation, was founded on 1st of August 1291. The federal parliamentary republic consists of 26 cantons. Each canton has its own constitution, its own parliament, government and courts. The Swiss Parliament consists of two houses: the Council of States, which has 46 representatives, and the National
Council, which consists of 200 members. Members of both houses serve for 4 years. A joint session of both houses is known collectively as the Federal Assembly. Citizens may challenge law passed by parliament through referendums and introduce amendments to the federal constitution through initiatives, which makes Switzerland a direct democracy. The population of Switzerland reached 7.7 million in 2012 and has a total area of 41,284 sq. km. Bern is the capital of Switzerland with a population of 346,000 (2009); however, the largest city is Zurich with 1.14 million (2009). The main religion of Switzerland is Christianity. The dominant language is German as the majority of the ethnic groups are German (65%). French, Italian and Romansch are also official languages (18%, 10% and 1% respectively). Switzerland has been a neutral state for centuries and it joined the United Nation in 2002. Although it is located in the center of Europe, Switzerland is not a member of European Union. Swiss – EU relations are based on a number of bilateral agreements. Switzerland is the center of global wealth and the heart of the banking industry (BBC, 2014).

Figure 1: Map of Switzerland.


The Federal President of the Swiss Confederation is Didier Burkhalter until January 1st 2015. Traditionally, each year a different member of the council is chosen to fill the position of Federal President. Major political parties in Switzerland are: Swiss People Party (SVP), Free Democratic Party (FDP) and Social Democrats (SP) and Christian Democratic Party (CVP). (BBC, 2014)
1.2 Economic Overview

Switzerland had a real GDP growth of ~3.0% in 2010 which slowed down in 2011 and 2012 to 1.8% and 1.0% respectively (see Table 1). Switzerland’s growth was higher than the EU27 real GDP growth of 2.0%, 1.7 and -0.4 from 2010 – 2012. According to the IMF data, its nominal GDP in 2012 was $631 billion, and its GDP per capita was $78,880. The Purchase Power Parity (PPP) nominal GDP in 2012 was $359 billion and $44,864 per capita. Switzerland has the world's nineteenth largest economy by nominal GDP and the thirty-sixth largest by purchasing power parity. It is the twentieth largest exporter, despite its size. Furthermore, according to the Credit Suisse Global Wealth Report 2013, Switzerland was ranked as the wealthiest country in the world in per capita terms in 2011 and has the highest average wealth per adult in 2013.

Table 1: Switzerland macro economic data from 2009 – 2012.

<table>
<thead>
<tr>
<th>Real GDP (billion CHF)*</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth (%)</td>
<td>-1.9</td>
<td>3.0</td>
<td>1.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Nominal GDP (billion USD)</td>
<td>509</td>
<td>549</td>
<td>659</td>
<td>631</td>
</tr>
<tr>
<td>Inflation Rate</td>
<td>-0.5%</td>
<td>0.7%</td>
<td>0.2%</td>
<td>-0.7%</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>3.7</td>
<td>3.5</td>
<td>2.8</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Note:* 1995 as base year

Switzerland has been facing deflationary pressure as seen in Table 1. Its unemployment rate is one of the lowest in the region at 2.9% in 2012. In contrast with other European countries, its population and labor force have been growing relatively fast since signing the “Free Movement of Labor Agreement” with the EU in 2002. The migration flows consist mostly of highly educated workers who can benefit from Switzerland’s GDP growth, unemployment rate, good working and living conditions.

Switzerland has had a positive current account balance since 1981. In 2012, Switzerland had a current account surplus of CHF 80 billion (14.3% GDP). Exports of

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goods of CHF 213 billion (35.9% GDP), and imports of goods of CHF 196 billion (33.1% GDP); thus, resulting in a net trade surplus of CHF 17 billion. Switzerland’s long-term trade trend is shown in Figure 2. In 2012, import and export of goods and services accounted for more than 40% and 50% of the GDP, respectively. According to the CIA World Factbook, classified by end user, household consumption accounts for 57.4%, government consumption 11.5%, investment in fixed capital 20.3%, investment in inventories 0.7%, export of goods and services 50.4%, and import of goods and services 40.2%. Classified by sector, agriculture is 0.7%, industry 26.8%, and services 72.5%. Its major industries include machinery, chemicals, watches, precision instruments, pharmaceutical products, medical instruments, metals, tourism, banking, and insurance.

Figure 2: Switzerland’s import and export of goods and services.

According to the Swiss Federal Department of Foreign Affair, Switzerland’s best known export items are watches, chocolate, and cheese; however, mechanical and electrical engineering and chemicals together account for over half of Switzerland’s export revenues. In particular, chemical and pharmaceuticals industry accounts for about 40.2%, and machine and electronic industry for 16.6%. The watch industry accounts for 10.9%. Figure 3 shows the detailed information for all major industries. Switzerland's main trading partners are European Union members. Data from the Swiss Federal Customs Administration (FCA) shows that the most important trading partners in 2013 were Germany, United States, Italy and France.
1.3 Trade Overview

Switzerland is closely integrated into the world economy, and its prosperity depends, to a large extent, on international trade in goods and services as well as on cross-border investment activities. Consequently, the constant improvement of access to foreign markets represents a core objective of Swiss foreign economic policy. Therefore, since 1 July 1995 Switzerland has been a member of the World Trade Organization (WTO). The European Union (EU) is Switzerland's main trading partner, whereas Switzerland is part of the most important EU trading partners (4th). The establishment of the Economic Free Trade Association (EFTA) in 1960 and the signing of the Free Trade Agreement in 1972 between the European Economic Community (EEC) and Switzerland form the basis of its relations with the EU.

Switzerland's economic and trade relations with the EU are mainly governed through a series of bilateral agreements where Switzerland has agreed to take on certain aspects of EU legislation in exchange for accessing the EU's single market. In 1999, a series of agreements, known as Bilaterals I, was signed. These Bilateral I agreements are mainly liberalization and market opening agreements. In 2004, nine more agreements, known as Bilaterals II, were signed. (Refer to Exhibit 1 for the list of Bilaterals I and Bilaterals II). Bilateral II agreements strengthen cooperation in the economic sphere and extend cooperation. These bilateral agreements effectively mean that Switzerland enjoys the benefits of EU member states and EEA countries on free movement of people, goods, services and capital – but without having lost any sovereignty or decision-making power.

To a large extent, Switzerland's network of FTAs consists of agreements that have been concluded in the framework of EFTA. Switzerland currently also has a network of
28 free trade agreements (FTAs) with 38 partners outside the EU\textsuperscript{2}. Switzerland normally concludes its FTAs together with its partners Norway, Iceland and Liechtenstein, in the framework of EFTA. Nevertheless, Switzerland has the possibility to enter into FTAs outside the EFTA framework as well, as it has been the case of Japan and China. A bilateral Free Trade and Economic Partnership Agreement between Switzerland and Japan was signed in September 2009. Switzerland is the first European country to have signed such an agreement with Japan. This FTA allows the exemption of customs duties for 99\% of trade transactions between these two countries for 10 years. In addition, a Free Trade Agreement between Switzerland and China was signed on 6 July 2013, which is the first FTA between China and any country of continental Europe. China is, after the USA, the world's second-largest economy and, after the EU and the USA, Switzerland's third most important trade partner. Before this agreement, China had an 11\% import tax, on watches and "luxury" watches valued at over 1,500 Swiss Francs were taxed at 20\%. The terms of the FTA require reducing watch-related taxes in China by about 60\% over a 10-year period\textsuperscript{3}.

Switzerland signed free trade agreements with the States of the Gulf Cooperation Council (GCC) and Albania. In May 2006 the USA and Switzerland formed a “Trade and Investment Cooperation Forum” to promote mutual trade.

Switzerland and the other EFTA States continue to develop an active dialogue with other potential partners such as the Mercosur States (Argentina, Brazil, Uruguay, Paraguay), in order to facilitate possible future free trade negotiations. Negotiations on free trade agreements with Guatemala, India, Indonesia, the Russia-Belarus-Kazakhstan Customs Union and Vietnam are continuing.

Emerging markets offer particularly attractive growth opportunities for the watch industry thanks to rising incomes and growing prosperity – but they also present special challenges for Switzerland, e.g. high import tariffs and taxes on luxury items levied by some countries – such as Brazil and India – constitute significant barriers to market entry (Credit Suisse Global Wealth Report, 2013). If trade barriers were to be eliminated, the Swiss watch industry could tap great potential in these markets. Therefore, Switzerland is

\textsuperscript{2} www.seco.admin.ch/
\textsuperscript{3} http://www.ablogtowatch.com/switzerland-china-free-trade-agreement-will-greatly-disrupt-swiss-watch-sales-globally
interested in concluding further free trade agreements with these countries.

1.4 National Competitiveness Analysis

Harvard Professor Michael Porter has noted: “A nation’s competitiveness depends on the capacity of its industry to innovate and upgrade. Companies gain advantage against the world’s best competitors because of pressure and challenge. They benefit from having strong domestic rivals, aggressive home-based suppliers, and demanding local customers.” (Porter, 1990). Switzerland does consistently well across the many areas that make a country productive and economically resilient. In accordance with The Global Competitiveness Report 2013-2014, which assesses the competitiveness landscape of 148 economies, providing insight into the drivers of their productivity and prosperity, “Switzerland retains its 1st place position again this year as a result of its continuing strong performance across the board.” (WEF, 2013).

Switzerland also remained the most innovative nation according to the world in the World Intellectual Property Organization’s 2013 Global Innovation Index. The country’s most notable strengths are related to:

- Innovation and labor market efficiency as well as the sophistication of its business sector (ranking 2nd in all three);
- Top-notch scientific research institutions, along with other factors, make the country a top innovator;
- Productivity is further enhanced by a business sector that offers excellent on-the-job-training opportunities, both citizens and private companies that are proactive at adapting the latest technologies, and labor markets that balance employee protection with business efficiency;
- Public institutions in Switzerland are among the most effective and transparent in the world (5th);
- Governance structures ensure a level playing field, enhancing business confidence: these include an independent judiciary, a strong rule of law, and a highly accountable public sector.

The Heritage Foundation, a public policy research institute that promotes free enterprise and limited government, said in 2012 that Switzerland's economic freedom score is 81.1
(out of 100), making its economy the 5th freest in the world in 2012. The report noted that Switzerland excelled in trade freedom, property rights and freedom from corruption⁴.

**Endowment** - Switzerland is an advanced and competitive market. The country’s extremely high competitiveness is achieved “*without either a natural resources endowment or a large domestic market*” (Goodman, Maro, Molander, Ojeda & Tompkins, 2010).

**Location** - Located at the center of Europe, Switzerland has close economic ties with the EU and largely conforms to the economic practices of the EU even though it is not a member. EU is the main trading partner with Switzerland.

The EU is Switzerland's main trading partner, whereas Switzerland is part of the most important EU trading partners (4th). Swiss merchandise exports to the EU are concentrated on a few sectors, particularly chemicals and medicinal products, machinery, instruments, watches, financial services (more than 60%, EU, 2013). Developed countries are the main partners for Foreign Direct Investment in Switzerland. The United States is the main investor as well as the main destination, in terms of Foreign Direct Investment stock.

Switzerland has a dual system for the admission of foreign workers. Citizens of an EU or EFTA member state can benefit from the bilateral agreements between Switzerland and the EU. EU persons have a right to reside and work in Switzerland. In 2013, foreign workers represented 23.5 % of the Swiss population – a relatively small increase from the 20 % recorded in 1999 (De Micco, 2014).

**1.4.1 Macroeconomic Competitiveness**

**Political Institutions & Social Infrastructure** – Founded in 1848, the Swiss Federal State now comprises 26 autonomous, largely self-governing cantons. Although Berne is the federal and administrative capital, Zurich is very much the financial and commercial center. Other major cities include Geneva, Basle and Lausanne. Swiss politics are characterized by consensus and stability and voters have a large say in the political and

⁴ [http://www.heritage.org/index/country/switzerland](http://www.heritage.org/index/country/switzerland)
administrative life of their country, through a long-standing tradition of referenda on a wide range of issues. The government has been since 1959 a “grand coalition” of the main parties, all represented in the Federal Council (cabinet). National elections are held every four years, next in autumn 2015\(^5\). The basis of a strong national macroeconomic competitiveness is the principle of neutrality. Switzerland has been neutral since 1515, which also acknowledged by the great European powers after the Napoleonic Wars in 1815. No other country in Europe can look back on such a long tradition of neutrality (Handbook for Investors, 2012).

**Fiscal Policy** – The international comparison of the Swiss tax policy shows that Switzerland has a tax system, which is constantly very competitive compared with highly developed industrial countries. The lowest overall taxes in the OECD, including a flat Swiss Federal profit tax of 8.5\%, a lump-sum tax option (special tax arrangement provided by both federal and most cantonal tax regulations) for wealth transfers abroad, banking secrecy, all explain the relocation of European headquarters of the global companies. According to an analysis by the consultancy company Arthur D. Little, more than 300 headquarters have been relocated to Switzerland from 2003 to 2011. More than 53\% of these companies come from USA, 31\% from Europe and 11\% from Asia. Prominent examples such as eBay, Bombardier, Yahoo, Google, IBM or Kraft show the attractiveness of Switzerland as a location for company headquarters (Handbook for investors, 2012).

Switzerland’s Fiscal position is strong with a small surplus. Reforms to unemployment insurance and a VAT increase, earmarked for financing invalidity pensions, allowed the social security funds to improve its balance, while the federal government, cantons, and municipalities ran small deficits. The “debt brake” rule continues to ensure prudent fiscal policy. In 2013 and 2014, fiscal policy is expected to be somewhat tighter than what is needed to fulfill the fiscal rule (IMF, 2013).

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\(^5\)http://www.ukti.gov.uk/export/countries/europe/westerneurope/switzerland/item/107257.html
Monetary Policy – Swiss monetary policy, administrated by the Swiss National Bank (SNB), has focused on price stability. In accordance with a SNB press-release: “The Swiss National Bank (SNB) is leaving the minimum exchange rate of CHF 1.20 per euro unchanged. The Swiss franc is still high. An appreciation of the Swiss franc would compromise price stability and would have serious consequences for the Swiss economy. The minimum exchange rate is an important instrument in avoiding an undesirable tightening of monetary conditions. The SNB will therefore enforce this minimum rate with the utmost determination and, if necessary, is prepared to buy foreign currency in unlimited quantities for this purpose. In addition, the SNB is leaving the target range for the three-month Libor unchanged at 0.0–0.25%. It stands ready to take further measures at any time. The inflation forecast is based on an unchanged three-month Libor of 0.0% over the next three years.”6 As a country reliant on exports for growth, the strong Swiss Franc has resulted in Swiss companies exporting goods at the highest end of the value chain, including pharmaceuticals, watches and medical devices.

1.4.2 Microeconomic Competitiveness

State of Cluster Development – There are some strong dominated clusters: Banking (Financial Services), Biopharmaceutical, Precision Engineering, Medical Technology, Watchmaking and a set of broader cluster groups which additionally include metalwork and electrical engineering (Gugler & Keller, 2009; Handbook for Investors, 2012). The key characteristics of the clusters included (1) strong, developed, highly innovative, export-oriented, high value add industries; (2) significant evidence of cluster co-location creating innovation; (3) clusters are continuously evolving and upgrading – Swatch Group – leader in the related field of precision engineering. Switzerland’s “State of cluster development” ranks fifth in the world (WEF, 2013).

National Business Environment (NBE) – Overall, Switzerland’s business environment ranks first in the world (WEF, 2013). We noticed that the Swiss business environment could be characterized by many strengths and a few but important weaknesses (Figure 4). The robust performance is achieved through various strengths in

6 http://www.snb.ch/en/
all four areas of the National Diamond (Figure 4), that drive the positive business environment:

1) Factor (input) Conditions – Compared with the majority of the western European countries, Switzerland has efficient and free labor market. Switzerland’s “Labor market efficiency” and “Higher education and training” ranks first and third accordingly in the world (WEF GCI, 2013). Switzerland’s openness to foreign labor is partly explained by the inadequate supply of scientists and technicians from the country’s universities. Starting business in Switzerland takes 18 days vs. 11.1 in OECD7.

Figure 4: Switzerland’s national diamond (factors driving the quality of its NBE).

Source: Team analysis

2) Context for Firm Strategy and Rivalry - Switzerland has a 0% average tariff rate. Some non-tariff barriers impede agricultural imports. Foreign investment is not screened, and the government generally treats foreign and domestic investors equally. As a leading financial center, the highly developed financial sector provides a wide range of financing instruments for foreign and domestic investors. Despite the challenging

7 http://www.doingbusiness.org/data/exploreeconomies/switzerland
external environment, banks remain well-capitalized\(^8\). One of the key weaknesses in the Swiss business environment is the lack of investor protection. The World Bank ranks Switzerland 169 of 189 countries on investor protection (World Bank, 2013), whereas the World Economic Forum ranks Switzerland 34 of 189 countries on protecting minority shareholders (WEF GCI, 2013).

3) Demand Conditions – Switzerland’s demand conditions are favorable. The country benefits from affluent and quality conscious domestic customers, tourists and international meeting participants who reflect the needs of several other nations (Goodman, Maro, Molander, Ojeda & Tompkins, 2010). In addition, the Government is a leader in setting strict political stability, quality, safety and environmental regulations and closed integration with other countries.

4) Related and Supporting Industries – Switzerland has several well-developed and interconnected clusters. It provides access to a wide range of high-quality suppliers that share technology and cooperate on marketing efforts.

Impact of the Government on the National Business Environment – As discussed previously, the Swiss Government plays an important role in improving the business environment. However, there are some weaknesses illustrated in the National Diamond (red and yellow items) in Figure 4 that should be addressed by the Government.

The Swiss Policy Process – There is no strongly coordinated national economic strategy: multiple dispersed actors make separate economic policies in Switzerland. The actors are Swiss National Bank responsible for monetary policy, OSEC (FDI attraction, Federal spending), and the Cantons (Goodman, Maro, Molander, Ojeda & Tompkins, 2010). There is no Cluster policy at the Federal level, however, existing clusters, as discussed above, are coordinated by the Cantons.

\(^8\) [http://www.heritage.org](http://www.heritage.org)
1.5 Institutions for Collaboration (IFCs)

The IFCs or Institutions for Collaboration are organized in research, finance, watches, chemical and machinery. A large number of research focused IFCs have focused on Life and Material Sciences (Goodman, Maro, Molander, Ojeda & Tomkins, 2010). The research and innovation IFCs help to provide information and advice on research and innovation programs, for example Euroresearch. Also we can mention the Centre Suisse d'Electronic et Microtechnique (CSEM) that provides innovative applications and solutions to the customers by helping them on R&D and developing specific business solutions on medical, transportation, energy, life sciences, security and telecommunication.

The Swiss Nano Science Institute (SNI) combines basic sciences with application-orientated research. Its focus being on nano scale structures that provide new developments to the Life Sciences.

Other important IFCs are:

- **Research and Institutions**
  - Euroresearch
  - Swiss Nano Science Institute
  - Centre Suisse d'Electronic et Microtechnique (CSEM)

- **Finance**
  - Partners Group (Private Equity firm)
  - Finantz Platz Zurich (Financial center)
  - Capvis (Private Equity firm)

- **Watches**
  - Federation of Swiss Watch Industry
  - Federation de L'Horlogerie

- **Chemical**
  - Novartis (company)
  - Civa (company)

- **Machinery**
  - Autocluster
1.6 Industries and Clusters

“A number of internationally important industry clusters have developed in the last years in Switzerland, among them automotive, building technology, cleantech, information technology, life sciences, chemicals and pharmaceuticals, the luxury watch industry, the machinery, electronics and metals industries, medical technology, and commodities trading”\(^9\). The excellent environment for research and technology in Switzerland has helped the development of these clusters.

Gugler and Keller in their study “The Economic Performance of Swiss Regions” written in 2009 have divided the clusters into three categories: i) the main cluster, ii) employment and iii) specialized. The main cluster respects both, employment and concentration ranks (refer to Figure 5). The most important are financial clusters located in Lugano, Zurich and Geneva; metal clusters in Northern Jura, Reinthal; watches and precision instrument clusters located in Jura, chemical clusters at Northwestern Switzerland; electronics and electrical machinery in the Northern Jura-Südfuss, Zürichsee, Lake Neuchâtel.

**Figure 5: Main clusters in Switzerland.**

![](image)

Source: (Gugler & Keller, 2009)

\(^9\) [http://www.s-ge.com/germany/invest/en/content/globally-significant-industry-clusters](http://www.s-ge.com/germany/invest/en/content/globally-significant-industry-clusters)
The employment intensive clusters accounts for the share of total Swiss cluster employment dispersed over the Swiss territory. The most important is the tourism cluster located in the cities of Valais, Lake Lucerne, Ticino and Grisons. Secondly, the food and beverage clusters located on Fribourg, Northern Vaud, Aargau, Lucerne and Northeastern Switzerland.

In 2007 the workforce in the different clusters varied a little, first was the financial cluster with ~100,000, transportation with ~60,000, metals with ~52,000, watches with ~45,000, metals with ~52,000. Extremely well educated, technically skilled and often multilingual employees are helping these industries to grow.

Finally the specialized clusters are: textile clusters located in Eastern Switzerland, Aargau Oberaargau, Lucerne; apparel clusters, footwear and leather clusters located at Central Jura, tobacco cluster, petroleum and coke clusters (Gugler & Keller, 2009).

2. Luxury Watchmaking Cluster

2.1 History of Cluster

The birth of the Swiss watch industry is historically traced to Jean Calvin, the protestant reformatory of the 16th century. His austerity reforms were implemented in 1541 and “banning the wear of jewels, forced the goldsmiths and other jewelers to turn into a new, independent craft: watchmaking” (Federation of the Swiss Watch Industry FH, 2014).

The new craft bred an industry. These “artisans” formed the Watch Makers Guild of Geneva in 1601. The high quality of the Geneva watches became notable. The popularity brought many competitors into the city and some of the watchmakers moved out into the Jura region. Located far from Geneva, they experienced some difficulties in getting supplies. The manufacturers recruited local farmers to make watch parts. Daniel Jean Richard was the first watchmaker who skilled the local farmers to make watch components. They accomplished production of certain watch parts and the final assembly
was made by “master watchmakers”. This trend was “spread throughout the Jura region” (Reddick, 2012). The Swiss watch “value chain” was established. During the 18th and 19th centuries, notable luxury Swiss watch brands emerged:

- 1775 - Vacheron Constantin and Breguet
- 1833 - Jaeger-le-Coultre
- 1835 - Blancpain
- 1839 - Patek Philipp
- 1875 - Piaget

In 1770, Abraham-Louis Perrelet created the “perpetual” watch. In 1816, the first chronograph watch was offered by Louis Moinet. The first pendant winding watches were invented by Adrien Philippe in 1842. During the 19th century, the watches with special features such as the perpetual calendar, the fly-back hand and chronographs were introduced. There was a drastic stagnation of the industry through the years during and after the Civil War in the United States. The output of US watches increased from a total of 14,000 in 1858 to 118,000 in 1864. The effect on the Swiss watch industry was very negative with exports declining 74% from 18.3 million francs in the 1860s to 4.8 million francs in 1876 (Hegarty & Corner, 1996).

At the beginning of the 20th century, the mass production of Swiss watches began. The high productivity “the interchangeability of parts and the standardization progressively led the Swiss watch industry to its world supremacy” (Federation of the Swiss Watch Industry FH, 2014). Rolex introduced the first water resistant watch in the 1920s and the first automatic winder in 1931. By the end of the World War II, Swiss watchmakers in order to compete with US manufacturers decreased watch sizes and increased reliability. The market shares of the Swiss watch industry increased to 80% of the world market share.

In 1967, the world’s first quartz wristwatch was developed in the Centre Electronique Horloger (CEH) in Neuchâtel. This innovation led to the introduction of the quartz movement by Seiko and Citizen, the Japanese watchmakers, and further to the market domination by the Japanese producers in the middle of 1970s until the mid 1990s.
The Swiss watchmaking industry suffered as its sales dropped by 40% in 1974. Swiss watchmakers recouped the leadership in the world market in the early 1980s. It took more than 10 years to refocus the strategy towards consumers “from technology to fashion” and reinforce their distribution channels to ensure the leadership on the global scale of watch industry (Hegarty & Corner, 1996).

2.2. Swiss Made, Swissness and Hallmark of Geneva

In the Swiss watch industry, the “Swiss made” label enjoys a solid reputation throughout the world. "Swiss made" embodies a concept of quality that includes the technical quality of watches (accuracy, reliability, water-resistance and shock-resistance), as well as their aesthetic quality (elegance and originality of design). It covers both traditional manufacturing and new technologies (micro-electronics). According to the current “Ordinance regulating the use of the name 'Swiss' on watches” (dated 1971) the following criteria should be met in order a watch to be qualified as “Swiss made”:

A watch is considered Swiss if:

- Its movement is Swiss, i.e.,
  - The movement is assembled in Switzerland,
  - The movement has been inspected by the manufacturer in Switzerland and
  - The components of Swiss manufacture account for at least 50% of the total value, without taking into account the cost of assembly;
- Its movement is cased up in Switzerland, and
- The manufacturer carries out the final inspection in Switzerland (Credit Suisse Global Wealth Report, 2013).

To protect the “Swiss” brand against wrongful use the Swiss Federal Council and the Parliament initiated the “Swissness” legislative amendment that was approved on 21 June 2013. The “Swissness” amendment will be used as the basis for the new regulations governing the use of the Swiss name on watches. According to the “Swissness” amendment for all industrial production (e.g. watches), at least 60% of the production costs should be attributable to operations carried out in Switzerland; this may include the costs for assembly, research and development, and legally or industrially regulated quality assurance and certification. Moreover, at least one essential manufacturing
process must take place in Switzerland. Compared to the existing ordinance, the “Swissness” amendment applies not only to the movement and final inspection, but to every component of the watch (including wristlets and cases).

There are different views on the “Swissness” amendment, i.e. representatives of Switzerland's “Haute Horlogerie” welcome the “Swissness” amendment. These mainly large watchmakers produce most of the components of their watches in their own works on Swiss soil. At the same time small and mid-sized Swiss watch companies that produce watches in the low and medium price segments and that source a majority of their watch components abroad were against this 60% minimum requirement.

2.2.1. Hallmark of Geneva

Certain regions in Switzerland have their own "place of origin" labels. One of the most renowned is "Genève", which identifies top-quality timepieces made in the city and canton of Geneva. Since November 6, 1886 the Hallmark of Geneva or the “Poinçon de Genève” (stamp of Geneva) has been established as an independent label of quality. The Hallmark of Geneva office is today part of TIMELAB – the Geneva Laboratory of Horology and Microengineering. The assessment is conducted by officially appointed sworn inspectors supported by at least one audit of the participating companies a month. In order to get the certification the following strict conditions should be met:

1. The candidate company has to be registered in the Canton of Geneva. It must also have carried out the assembly, adjustment and casing-up of the movement and any additional mechanical modules as well as the inspection of the cased-up watch.

2. The movement, additional modules and the exterior parts of the watch have to be approved by the technical committee of the Hallmark of Geneva, made up of seven sworn members. Its components are then regularly inspected at the company by the auditors of the Hallmark of Geneva office.

3. All the cased-up watches (without strap or bracelet) have to comply with the criteria of the Hallmark of Geneva. The inspections cover the water-resistance, the rate, the functions and the power-reserve of the watch.\(^\text{10}\)

\(^\text{10}\) \url{www.vacheron-constantin.com}
Watches that qualify for the Hallmark of Geneva bear the official seal on the movement and on the case. If possible the hallmark must be engraved on the component that bears the serial number. If the movement has an additional mechanism, the hallmark can be stamped on the plate of the mechanism and/or on one of the bridges. There are only four watch manufacturers, Vacheron Constantin, Cartier, Chopard and Roger Dubuis, that currently have the certification “Hallmark of Geneva”.

2.2.2. Institutions for Collaboration

The Swiss watch cluster is supported by a strong group of IFCs and research organizations that specialize on micro technology as well as watch making industries (Goodman, Maro, Molander, Ojeda & Tomkins, 2010). Most of the Swiss watch manufacturers are based around the foot of the Jura mountains, in the cantons of Berne, Geneva, Neuchâtel, Jura, Vaud and Solothurn. The watchmaking industry cluster consists of manufacturers, suppliers, designers, educational and research institutes, together with official bodies and sector-based associations (Credit Suisse, 2013).

Switzerland is the home for well respected research institutes for precision industry and nanotechnology: the Swiss Center for Electronics and Microtechnology (CSEM) in Neuchâtel; the Swiss Federal Institute of Technology Zurich (ETH); the Swiss Federal Institute of Technology Lausanne (ETHL), including its center for micr-nano technology focused on the early stage of R&D; the Swiss Federal Laboratories for Materials Science and Technology (EMPA) in Dübendorf and Thun; the Swiss Nanoscience Institute in Basel; the Adolf Merkle Institute in Fribourg; the IBM research center in Zurich and the Paul Scherrer Institute in Villigen. The Berne University of Applied Sciences ideally combines practice and theory in the fields of study mechanical engineering and medical technology. Around 29% of Swiss R&D expenditure is contributed by the machine-building, electrical and metal industries (MEM) (Berne Economic Development Agency, 2010).
2.3. Cluster Performance

The watch industry was at the verge of collapse in 1970/80s; however, its successful comeback is associated with the strategic changes within the industry to refocus on high-end products in the 1990s. Mechanical watches and the “Swiss made” label became symbols of social status (Credit Suisse, 2013). The watch exports since 1990 are very much aligned to the luxury goods industry sales (refer to Exhibit 4). Additionally, the average Swiss watch export price has increased to CHF 737 in 2012, due to the increase in the mix of mechanical watches versus quartz watches (refer to Exhibit 4).

Switzerland’s watch industry has been experiencing double digit growth in 2010-2012, with a breakthrough export year in 2012 of CHF 21.4 billion equivalent to 10.7% share of total exports of goods (refer to Exhibit 6). This makes the watch industry the 3rd largest export sector pharmaceuticals (CHF 58.5 billion) and the machinery sector (CHF 21.5 billion) in 2012 (Credit Suisse, 2013). The growth was almost halved in 2012 to +11% versus +19.4% the prior year, and is estimated to be even lower at +2% growth in 2013 (Federal Customs Administration, 2014).

In 2012, gold watches were very popular, with a +20.5% increase in exports and accounting for more than half of the sector’s growth. This growth also points to the higher average watch prices and watches as a luxury item (Federation of the Swiss Watch Industry, 2013). Steel and bimetallic watches had below average growth between 5.3% - 8.3% versus 2011. In terms of volume, steel watches accounted for approximately 53% of the exports in 2012 (refer to Exhibit 11).

According to Credit Suisse’s analysis, an estimated 95% of Switzerland’s production is exported and Swiss watches account for only 2.5% of the global watch production (2013). Switzerland is the largest exporter in terms of value while China is the largest exporter of units (662.5 million in 2012). In terms of exports, 20.4% goes to Hong Kong, 10.2% to the USA and 7.7% to China (refer to Exhibit 10). The biggest year over year growth was experienced by Germany with +33.1% growth versus the prior year and the USA +10.1% (refer to Exhibit 8). This trend can be associated with increased expenditures for luxury goods and a general recovery in the US and EU following the financial crisis. However, Asia was the most important market for Switzerland’s watch
exports in 2012 with 54% share followed by Europe with 30% (which took market share from Asia in 2012) and America with 14%. Furthermore, Asia has also been the biggest growth market for the Swiss watch exports when looking at the share percentages from 2000 to 2014 (refer to Exhibit 8 and Exhibit 12).

2.4. Consolidation and Vertical Integration

Since 1952 the number of companies in the industry has dropped dramatically as shown in Exhibit 3 (from more than 2000 up to 564 in 2012). Over the last three years the long-term consolidation trend has accelerated, and the number of companies has continued falling steadily while individual companies have been growing in size: the average company size rose from 65 employees in 2000 to 99 in 2012 as can be seen in Exhibit 3 (Credit Suisse Global Wealth Report, 2013). The main factors for this development were vertical and horizontal integrations.

Horizontal integration enables brands or groups to increase their brand portfolio. Large groups such as Swatch Group or Richemont already have a comprehensive brand portfolios but still retain some appetite to acquire new brands, as it was proved by the Swatch Group’s acquisition of Harry Winston in 2013. However, the main factor driving the watch industry consolidation was the increasing trend towards vertical integration of production.

2.4.1. Vertical Integration of Production

In the beginning of the 1990s, the Swatch Group initiated the process of the vertical integration of the production process by announcing to limit deliveries of the movements and assortments to competitors by its subsidiaries ETA (movements) and Nivarox-FAR (assortments). The watch sector was highly dependent on these two suppliers (ETA is estimated to have served over 70% of the market for mechanical movements over many years and Nivarox-FAR accounts for an estimated 90% of the market for assortments). In spring 2013, the Swiss Competition Commission (WEKO) and the Swatch Group agreed that the Swatch Group will gradually reduce deliveries of movements and assortments to third-party customers by 2021 and 2015, respectively.

Following the example of the Swatch Group, Richemont and later LVMH, as well as independent brands such as Patek Philippe and Rolex, subsequently adopted the
strategy of vertical integration of production. This vertical integration was done either by acquiring independent suppliers or by expanding their own production capacities. Advantages of the vertical integration of the production process are:

- Manufacturer’s control over the entire value chain;
- Less dependence on external suppliers;

However, this strategy has several disadvantages, as it is very costly and time-consuming. Therefore, not a viable option for smaller manufacturers. In order to achieve economies of scale, smaller firms have to find a partner for production of the required components. Another solution might be to purchase movements from a different supplier, but the few remaining independent suppliers of mechanical movements produce much lower quantities than ETA, and their prices are usually much higher. Thus, in order to operate independently of ETA, companies need to have not only the necessary financial means but also ongoing developments, which require time.

2.4.2. Vertical Integration of Distribution

The trend towards vertical integration of distribution in the watch industry was initiated in the 1990s, when watch brands belonging to big groups such as Swatch and Richemont began to establish their own distribution subsidiaries. However, local distributors continued to be used as well depending on the market environment. By the end of the 1990s, an increasing number of brands, mainly from the high end and luxury segment, began to establish retail shops, such as monobrand boutiques, or flagship store. Either the watchmakers manage the flagship stores themselves, or they license the operation. A less common approach is the multibrand boutique, which offers several brands from the same group. The highest concentration of monobrand boutiques is in Asia, over one-third of these boutiques are located in China alone (including Hong Kong and Taiwan); the Arab region (Dubai) and major European cities (Paris, London) (Credit Swiss Global Report, 2013).

A key advantage of vertically integrated distribution is in marketing. A manufacturer can present its entire collection at a flagship store. A monobrand boutique provides better inventory control, sales tracking and pricing control. Monobrand stores also eliminate grey market to a certain extent. Monobrand boutiques can offer their staff brand-specific training and thus better communicate brand values to customers. Finally,
the brand retains the retail margin in-house (Deloitte AG, 2013).

The main disadvantage of vertically integrated distribution is high investment costs which are driven by high rental prices of the prime locations where the watch companies want to open their stores to increase customer frequency. Vertical integration of distribution by major brands can also open up opportunities for smaller brands. It can create space on the shelves of independent multibrand boutiques, where smaller brands can improve their market presence.

2.5 Value Chain

With today’s market environment and vertical integration reviewed earlier in the paper, many changes have occurred to the watchmaking value chain. Two key catalysts for these changes are the market expectations which are continuously changing whilst aligning to the increasing luxury industry demands and the Swiss made requirements. These also have influenced the order of activities in the value chain process. Today watches are perceived as more than simple timepieces, they have become status symbols. Consequently watchmakers must increasingly differentiate themselves from their competitors. “Standing out requires exclusivity and for Swiss watches the movement plays an important role” (Credit Suisse, 2013).

There are eight elements in the process (Figure 6): Design, Electrical and Mechanical Components, Manufacturing, Movement Assembly, Inspection, Wholesaler and Retailer and Branding-Marketing as an on-going process. The changes from previous years, include “Design” which has become an important step as watchmakers are hiring known designers linked to fashion, architecture, innovation and other fields, to differentiate themselves and increase the brand’s value. Another change as a result of vertical integration is ownership of the production process which includes the suppliers as part of the internal value chain. This control over the supply chain is adding flexibility for watchmakers and changing the way they are being innovative with new materials they include in their designs. Furthermore, watchmakers are sourcing their own needs; at times even manufacturing their own raw materials (e.g. Hublot’s scratch free 18K gold/ceramic mix), semi-products (movements, etc.) and finished goods assembly.
A second critical step in the new value chain is the “Swiss made”, “Swissness”, or “Hallmark of Geneva” requirements as marked in green in Figure 6 (see section 2.2 for requirement details) that have influence the value chain map, including a critical inspection step requirement post the movement assembly. The Swiss made label is a protector of the luxury watch market. It monitors the traditional Swiss component and encourages manufacturers to ensure that foreign fashion brands come to Switzerland to produce luxury watches.

To further differentiate themselves and to align with the luxury market trends, watchmakers are approaching wholesalers and retailers with new terms and their consumers with monobrand or flagship stores globally. Finally, the branding and marketing activities must occur throughout the value chain process to increase the brand’s equity and awareness. The wing-2-wing process allows for collaboration within the cluster in research and development, innovation of new products or industry best practices as well as marketing activities specifically around quality and “Swiss made” benefits. It also requires the development of new skills which are embedded in the training programs within the industry (in-house or at an educational facility).

2.6. Cluster Competitiveness

Michel Porter in his article “Competitive advantage of Nations” emphasized the importance of the location of specific clusters and nations for development of the competitiveness of the global corporations. In addition, there are economists that underline the importance of “geographically localized resources” for the competitiveness of corporations and the industry as a whole. The Swiss watch cluster is the great example of the industry competition based on the nations and the regions strengths.
The comeback of the Swiss watch industry in the global market after the crisis in 70s-80s was a big achievement. The industry was considered nearly dead at the beginning of 1980s. Expansion and the mass production of the watches with the mechanical winding as well as the beginning of the quartz-watch era and the Japanese rivalry initiated the Swiss watch crisis.

Big declines and stagnation in exports followed by the abrupt drop in employment from 89,000 in 1970 to 33,000 in 1985 (Donze, 2011). Nevertheless, by the end of 1980s the Swiss watch industry had a comeback. Swiss watch exports increased from 4.9 billion US dollars in 1990 to 6.1 billion US dollars in 2000. The new marketing strategy was intended at “repositioning towards Japanese and Chinese competitors” (Donze, 2011). During this decade Swiss watch industry experienced “a shift towards luxury, characterized by the decrease of the volume of watches exported and a steep rise in their value” (Donze, 2014). The new period of growth was marked by the industries given highest priority to innovation of product and technologies.

The continuous rollout of the new sophisticated products by various leading manufacturers such as Self-Winding Tourbillon (Audemars Piguet) and Ceramic Pieces on Case (Rado) in 1986, Analog/Digital Display (Tissot) in 1987, Micro-Transmitter (Breitling) in 1995, Co-Axial Watch (Omega) in 1999, brought the cluster to one of the major player in the global watchmaking market. The four major components of the success were: i) technological innovation, ii) diversification of the product, iii) the highest quality and iv) heritage, which contributed to the recovery and the competitiveness of the “Swiss made” watches. The legislation of the Swiss made watches tightened the rules in order to “guarantee the truthfulness” (Donze, 2014).

Another major achievement of the Swiss watch industry nowadays is the complete “in-house” production cycle (mainly due to acquisitions) and the value chain that allows the companies to have a full control over the parts supply, production and quality. The value chain starts from the design, to the manufacturing of the electrical and mechanical components, movement assembly, inspection and concludes with the distribution or direct sale (ETA, Swatch, Rolex, Richemont, LVMH).

Another element of the strong growth of the watch cluster in Switzerland is the steady growing demand from tourists. Despite the Swiss Franc appreciation, the foreign
demand for “Swiss made” watches increased through exports to a number of countries. But the sales to tourists who are visiting the country are also “contributing” (Deloitte AG, 2013). The most favorite locations like Zurich, Interlaken and Lucerne attract the tourists to the watch boutiques. The tourism industry as a part of the cluster is directly linked to and therefore impacts the prosperity of the watch industry. The number of Arabic and Asian tourists, who are the main consumers of the expensive luxury mechanical watches increased in 2012 (Deloitte AG, 2013).

The demand and conditions of the global competition permanently changed. The growing demand for the luxury watches in Asia, India and Africa so far have been on the hands of the Swiss watchmakers. Nevertheless, Hong Kong and China become more and more competitive not only due to the production costs, but also due to aspects of the gained experience since the late 1960s (Donze, 2014).

Eventually, there is no immediate threats to the Swiss watch cluster, though cluster participants and Swiss watchmakers must closely monitor the competition coming from China and India who are trying to come up with their own luxury watch brands.

2.6.1. Swiss Watchmaking Cluster Map

The cluster map we present in Figure 7 is very deep and structured. The movements, components manufacturers (including raw materials) and watch & clocks companies are basis of the cluster.
In Figure 7, the local suppliers of the movement manufactories are presented on the left side, including engineering services, metal, machinery tool equipment and electronics. The competitiveness of these supplies is very strong and is similar to the related industries linked to the manufacturing parts, that appeared as a spillover of the highly skilled workforce and include medical devices, information technology, nanotechnology and automotive among others (Goodman, Maro, Molander, Ojeda & Tompkins, 2010).

One dominant trend is the vertical integration of production. The Swiss watch industry has undergone a significant structural transformation in recent decades, a process that is likely to continue over the medium term. Given the desire to control the entire value chain, from the tiniest component through the assembly of the watch, brands are buying up suppliers across the board, or are building up their own production capacity. The integration of these production stages is inevitably resulting in concentration within the industry. One key driver of this development is the Swatch Group's desire to halt the sale of movement components. The desire for exclusivity and a high degree of independence from suppliers, particularly at times of strong demand, is the driving force behind this trend (Credit Suisse, 2013).
Another part of supporting industries, some local communication and advertising agencies, designers and specialized banks, presented on the right side of the map. This part of the cluster is qualitatively less competitive if we take into consideration that some of the foreign brands (LVHM) conduct these activities out of the country, while they keep production in Switzerland (the Swiss watchmaking value chain map is shown in Figure 7). The related industries are jewelry, Swiss luxury goods groups and tourism. As with production, distribution is also increasingly being taken in-house by the watch brands.

On the top of the map, there are educational organizations that play the key role is providing well-skilled labor to cluster and IFC. One of the specific forms of the educational organizations is the Hallmark of Geneva University. This university financed by Vacheron Constantin, Dubuis and Chopard supplies labor workforce with specific skills requested by these luxury brands. At the bottom of the map, there is Federal Government, Cantonal Government and State inspection, which deal with regulation (Swiss made rules) and finance the educational institutions for the cluster respectively.

2.6.2. The Swiss Watch Cluster Diamond

The Swiss watch cluster diamond we propose is very strong, well-structured and has unique strong correlations across all four aspects of the diamond (Figure 8). The long successful history of watch industry, extremely stable political and national business environment are the key elements of the cluster’s success.
Factor (Input) Condition – There is highly skilled labor demand supported by specific watch making schools. And, as we mentioned above, there is new form of collaboration between watch companies and educational institutions – Hallmark of Geneva University – that brings the skill labor pool in accordance with very specific skill requirements of the watch industry.

More recently, as the industry focus has moved more towards fashion and design, the Swiss cluster has been very well supported by the greater European fashion industry and the large pools of people trained in fashion in France and Italy in particular (Goodman, Maro, Molander, Ojeda & Tompkins, 2010).

Strong Institutions for Collaboration (IFCs) – The most important IFC for the watch industry is “The Federation of the Swiss Watch Industry (FH)”. It’s a non profit association that currently brings together 500 members and represents 90% of all Swiss watches manufacturers (finished products, watch movements, components, etc.). The headquarters is located in Bienne and is the industry’s leading trade association.

The FH shares and promotes the Swiss watch industry and brand all over the world and plays the most important role in protecting the regulations around the Swiss made brand (Federation of Swiss Watch Industry FH, 2014). In addition to the important IFC we can mention the industry trade journals and magazines that facilitate information.
around the cluster and also serve as promoting firms. There are around 22 specialized
journals and magazines in Switzerland (Federation of Swiss Watch Industry FH, 2014).

**Low Access to Venture Capital Funding** – The top 20 venture capital rounds in
Switzerland in 2013 accumulated a total of CHF 340 million (previous year: CHF 300
million), 82% (previous year: 95%) of the total investment volume. In both years, almost
half was accounted for by the top five rounds. The life sciences start-ups lead the
rankings: Auris Medical (biotech), Covagen (biotech) and Biocartis (medtech) (Swiss
Venture Capital Report, 2013). Despite this growth and internationally competitive
banking system, Switzerland has poorly developed VC community. The key VC players
are concentrated mostly in biotech projects. However it is not great concern for cluster
development.

**Related and Supporting Industry** – As we identified, there is very structured
network between the Swiss watch brands and related and supporting industries. Watch
cluster is the sub unit of the very strong and highly developed micro technology and
precision engineering cluster (Gugler & Keller, 2009). These clusters are characterized
by unique skills, know-how, R&D, developed infrastructure, geographical location that
helps generate scale. Also there is strong correlation with French and Italian fashion
clusters from product design and marketing point of view. The watch industry benefits
from this through skill relocation in terms of marketing as well as gaining access to the
client and markets served by these fashion houses (Goodman, Maro, Molander, Ojeda &
Tompkins, 2010). The high quality image “Swiss Brand” is supported by all industries in
Switzerland: micro engineering, biotechnology, and banking. And all other Swiss clusters
focus on high quality, high value products.

**Demand Conditions** – The Swiss have a long history as a center of excellence in
watches and other precision engineering industries. Due to the long history and heritage,
all Swiss watch makers start with a high degree of credibility in the market place, the
firms then exploit this by marketing and reviving traditional brands and focusing on the
high quality segment of the market, the Government and IFC support by creating rules
around the use of the Swiss made label, and together these actions ultimately result in all
high end watches being manufactured in Switzerland (Goodman, Maro, Molander, Ojeda
& Tompkins, 2010).
Context for Firm Strategy and Rivalry – One of the key characteristics of the Swiss watch industry is a highly consolidation with 5 conglomerates making more than 50% of total retail value of watches (Credit Swiss Global Report, 2013). These five major companies that play in the luxury segment are relatively equal in size and compete very aggressively with each other. Competition is done via (a) brand proliferation and (b) innovation in product design and marketing. The current trend shows that companies compete through re-launch of brands rather than through price competition.

3. Risk & Opportunities

For the opportunities we can observe that there is an enormous potential for the Swiss watch industry, particularly in the emerging markets where the standard of living is forecasted to increase. Also there is an independence for luxury brands given by external suppliers due to the verticalization most of these brands are looking to be in charge of most of the value chain. Finally, there is a strong concentration and integrated value chain that is focused on the brand and marketing strategy since the start of the process. These can benefit a better presence of the brands throughout the country.

For the risks, there is a growing competition from foreign watchmakers. However, in the luxury niche, the watches have become a status symbol. The watch function as timepiece is becoming less relevant in the era of mobile phones and computers; people are starting to use their phones to be aware of time. Though it is still a social sign about status or personality it can be easily replaced. A general trend away from luxury and back towards modesty and frugality might emerge. The verticalization could limit the bargaining power with suppliers and distributors for smaller independent watchmakers.

4. Conclusion

To manage the risks & opportunities we mentioned above, we suggest undertaking the following key steps:

- **Cluster Policies** – To develop National strategy to define coordinated steps that different Swiss Federal and Regional authorities and agencies should follow.
- **National Business Environment** – To analyze and rethink the IFC role and the role of educational organization (such as Hallmark of Geneva University) due to
strong changes in the design expectations, innovative technologies, vertical integration in production and distribution, and great accent on marketing strategy not only for Europe but for Asia and China (value chain upgrade).

- Despite current difficulties that the Swiss watchmaking industry is currently facing in general there is a huge potential for the Swiss watch cluster to improve its performance in the near future. The potential is still lies in the growing luxury consumer market in Asia and other emerging countries (BRIC). The major area where the Swiss watchmakers should watch out is the growing cluster of luxury watchmakers in China. Their area of expertise and technological know-how is growing and getting stronger with years.
Exhibits

Exhibit 1: Bilateral Agreements

Bilateral Agreements I (1999)

1. Free movement of persons 1999
2. Technical barriers to trade 1999
3. Public procurement markets 1999
4. Agriculture 1999
5. Research 1999
6. Civil aviation 1999
7. Overland transport 1999

Bilateral Agreements II (2004)

1. Schengen/Dublin 2004
2. Taxation of savings 2004
3. Processed agricultural products 2004
4. MEDIA 2004
5. Environment 2004
7. Fight against fraud 2004
8. Pensions 2004

Source: www.europa.admin.ch
### Exhibit 2: Free Trade Agreements of Switzerland

<table>
<thead>
<tr>
<th>Region</th>
<th>Status / comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Europe</strong></td>
<td></td>
</tr>
<tr>
<td>EFTA-Convention</td>
<td>Entry into force: 3 May 1960</td>
</tr>
<tr>
<td>European Community (EC)</td>
<td>Entry into force: 1 January 1973; bilateral CH-EC</td>
</tr>
<tr>
<td>Faeroe Islands</td>
<td>Entry into force: 1 March 1995; bilateral CH-Faeroe</td>
</tr>
<tr>
<td>Macedonia</td>
<td>Entry into force: 1 May 2002</td>
</tr>
<tr>
<td>Albania</td>
<td>Entry into force on 1 November 2010</td>
</tr>
<tr>
<td>Serbia</td>
<td>Entry into force on 1 October 2010</td>
</tr>
<tr>
<td>Ukraine</td>
<td>Entry into force on 1 June 2012</td>
</tr>
<tr>
<td>Montenegro</td>
<td>Entry into force on 1 September 2012</td>
</tr>
<tr>
<td>Bosnia-Herzegovina</td>
<td>Signed on 24 June 2013</td>
</tr>
<tr>
<td>Customs union Russia -Belarus-Kazakhstan</td>
<td>In negotiations</td>
</tr>
<tr>
<td>Croatia</td>
<td>FTA terminated on 01.07.2013 (accession of Croatia to the EU)</td>
</tr>
<tr>
<td><strong>Mediterranean basin</strong></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>Entry into force: 1 April 1992</td>
</tr>
<tr>
<td>Israel</td>
<td>Entry into force: 1 July 1993</td>
</tr>
<tr>
<td>Palestinian Authority</td>
<td>Entry into force: 1 July 1999</td>
</tr>
<tr>
<td>Morocco</td>
<td>Entry into force: 1 December 1999</td>
</tr>
<tr>
<td>Jordan</td>
<td>Entry into force: 1 September 2002</td>
</tr>
<tr>
<td>Tunisia</td>
<td>Application since 1 June 2005 ; Entry into force: 1 June 2006</td>
</tr>
</tbody>
</table>

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11 Without indication, the agreements have been concluded within the framework of EFTA
<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lebanon</td>
<td>Entry into force: 1 January 2007</td>
</tr>
<tr>
<td>Egypt</td>
<td>Application since 1 August 2007. Entry into force: 1 September 2008</td>
</tr>
<tr>
<td>Algeria</td>
<td>In negotiations</td>
</tr>
<tr>
<td><strong>Worldwide</strong></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>Entry into force: 1 July 2001</td>
</tr>
<tr>
<td>Singapore</td>
<td>Entry into force: 1 January 2003</td>
</tr>
<tr>
<td>Chile</td>
<td>Entry into force: 1 December 2004</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>Entry into force: 1 September 2006</td>
</tr>
<tr>
<td>SACU(^{12})</td>
<td>Entry into force: 1 May 2008</td>
</tr>
<tr>
<td>Canada</td>
<td>Entry into force: 1 July 2009</td>
</tr>
<tr>
<td>Japan</td>
<td>Entry into force: 1 September 2009. Bilateral CH-Japan</td>
</tr>
<tr>
<td>Colombia</td>
<td>Entry into force: 1 July 2011</td>
</tr>
<tr>
<td>Peru</td>
<td>Entry into force: 1 July 2011</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>Entry into force: 1 October 2012</td>
</tr>
<tr>
<td>Cooperation Council for the Arab States of the Gulf (GCC)(^{13})</td>
<td>Signed on 22 June 2009, in ratification process on the GCC side</td>
</tr>
<tr>
<td>Central American States(^{14})</td>
<td>Signed on 24 June 2013 (Panama and Costa Rica)</td>
</tr>
<tr>
<td>China</td>
<td>Signed on 06 July 2013, bilateral CH-China</td>
</tr>
<tr>
<td>Thailand</td>
<td>In negotiations</td>
</tr>
<tr>
<td>Indonesia</td>
<td>In negotiations</td>
</tr>
</tbody>
</table>

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\(^{12}\) South African Custom Union: South Africa, Botswana, Lesotho, Namibia and Swaziland.

\(^{13}\) Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

\(^{14}\) Costa Rica, Guatemala, Honduras and Panama.
<table>
<thead>
<tr>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>In negotiations</td>
</tr>
<tr>
<td>Vietnam</td>
<td>In negotiations</td>
</tr>
<tr>
<td>Malaysia</td>
<td>In negotiations</td>
</tr>
</tbody>
</table>

Source: [www.seco.admin.ch](http://www.seco.admin.ch)

The EFTA States have signed Declarations on cooperation with the following partners: the MERCOSUR States (Argentina, Brazil, Paraguay, Uruguay), Mongolia, Mauritius, Georgia, Pakistan and Myanmar.
Exhibit 3: Companies and employees in the Swiss watch industry from 1952 - 2012

Source: Credit Suisse, 2013
Exhibit 4: Exports by i) Type of watch, number or units; ii) Type of watch and value; iii) Year over Year change % and CHF value; iv) Sales of worldwide Luxury goods in EUR and Year over Year change %

Source: Credit Suisse, 2013
Exhibit 5: Year over Year % change of the Swiss watch export value by watch type (mechanical & electrical; +15.9% increase in mechanical watches in value terms versus 2011).

Exhibit 6: Annual Swiss watch exports in CHF. Year over year increases are observed; however, the growth rate is declining.
**Exhibit 7:** Exports by industry sector shows a significant decline in the year of year percentage change of 2013 for watches (+1.9% in 2013 versus 2012 compared to +11% in 2012 versus 2011).


**Exhibit 8:** Distribution of the CHF 21.4 billion watch exports from Switzerland, the year over year percentage change and the overall share percentage.

Source: Federation of the Swiss Watch Industry FH 2013
**Exhibit 9:** List of the main exporting countries in terms of value USD in billions for 2012 Global watch exports.

Source: Federation of the Swiss Watch Industry FH 2013

**Exhibit 10:** Global watch exported units in millions in 2012, and the percentage change versus 2011.

Source: Federation of the Swiss Watch Industry FH 2013
**Exhibit 11:** 2012 Swiss watch exports by material type, in terms of volume (units) and value percentage distributions.

![Diagram showing watches by materials](image)

Source: Federation of the Swiss Watch Industry FH 2013

**Exhibit 12:** Main export markets of the Swiss watch industry.

![Graph showing main export markets](image)

Source: Credit Suisse, 2013
References


**Required Disclosures**

- No non-public information has been used in the preparation of this report.
- No member of the team is a national or long-term resident of Switzerland.
- Four of the five team members traveled to Switzerland during the project period as a school luxury tour. The members visited two watch manufacturers in the Geneva area (Vacheron Constantin & Hublot) as part of the luxury tour set by the MBA program.