

# From the Subprime Crisis to Covid, *the Vaud Miracle*

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# Foreword

When the first version of this report came out in late summer 2021, hopes were high that the pandemic would soon be under control, if not stopped entirely, thanks to progress on rolling out Covid vaccines. At the same time, the global, Swiss and Vaud economies were bouncing back with vigor. But it wasn't all smooth sailing: inflation was starting to resurface, interest rates were creeping up and there was little respite to the disruption in supply chains. What's more, Covid restrictions remained in place in several areas and travel was still difficult.

In mid-February 2022, the Swiss government finally lifted its Covid restrictions. Yet clouds quickly formed over other areas of the economy, owing mainly to the war in Ukraine, sanctions against Russia, rising commodity prices (especially energy), runaway inflation, higher interest rates and moves by central banks to swiftly tighten monetary policy.

By the time the English version of our report came out in the fall of 2022, the prospect of major energy shortages had further darkened the economic outlook. And the pandemic hadn't completely subsided, with new infections rising in Europe and localized lockdowns being introduced in China.

All these factors prompted analysts to lower their growth forecasts for the global, Swiss and Vaud economies. Back in January, the IMF had predicted global GDP to expand by 4.4% in 2022 and 3.8% in 2023, but these forecasts were pared back in October 2022 to 3.2% and 2.7%, respectively. In Switzerland, the State Secretariat for Economic Affairs cut its GDP growth forecasts for the country by one percentage point to 3.0% for 2022 and 1.1% for 2023. And for Vaud Canton, the CREA Institute of Applied Economics shrank its forecasts by one percentage point and a half percentage point, respectively, to 2.5% for 2022 and 1.4% for 2023.

Switzerland and Vaud are now subject to the same threats as the global economy, with a number of prevailing uncertainties. The country and the canton – along with neighboring countries – are facing the prospect of a severe energy shortage and economic recession. At the same time, Switzerland is grappling with country-specific risks like the rising Swiss franc, question marks about the future of its relationship with the European Union and the consequences of the minimum corporate income tax rate that will be introduced shortly.

As we write this report in early November 2022, Switzerland and Vaud have held up well, just as in previous crises. Inflation is not as strong here as in neighboring countries, and unemployment is historically low. But as far as Vaud is concerned, one question remains (and it's one we asked during the other challenges our canton faced over the past

15 years): does the “Vaud miracle” still stand? That is, does our canton still possess the unique strengths needed to weather the storm?

We think so. While Vaud is not immune to the global economic downturn, it has a good chance of making it through intact thanks to our diversified economy, positioning in high-added-value industries, and hard-working, innovative workers and businesses with a formidable capacity to adapt – even amid today's headwinds.

# Introduction

“The Vaud miracle is being put to the test.” In 2016, the first sentence of our study “Vaud – The Discreet Tiger” made it clear that the canton’s economy was already facing the new crises and challenges that had emerged since the subprime crisis. Five years have passed, and the canton has hardly known any peace. In less than 15 years, it has had to deal with five difficult events: the subprime crisis and the resulting global recession, the eurozone crisis, the abolition of the minimum EUR/CHF exchange rate, the trade war, and the Covid-19 crisis. On average, less than three years separated each of these episodes; however, the economic fabric of the canton, which had been renewed after the 1990s crisis, was able to cope with all of them.

The expression “Vaud miracle” reflects the canton’s robust economic growth in the early 2000s. Gross domestic product (GDP) grew by an average of 3.6% per year between 2004 and 2008, twice as fast as between 1998 and 2003 – and significantly faster than Swiss GDP as a whole (+3.2%). To some, the word «miracle» is not appropriate since it implies the result of a divine intervention - the canton of Vaud’s dynamism, instead, is the result of multi-level efforts focused on the development of high value-added activities and the canton’s capacity for innovation.

Nevertheless, in the broader sense of the term, a miracle is simply a prodigy, something extraordinary. And yet, the dynamics of the early 2000s – and the resilience of the Vaud economy in the face of the economic ups and downs following the onset of the subprime crisis – are just as pleasing as they are remarkable. Nowadays, the “Vaud miracle” is perhaps less glittering than it was in the early years of the century; but while other regions and countries have experienced increases in debt and unemployment since the subprime crisis, the canton - like the rest of Switzerland – has been able to preserve its healthy public finances and a dynamic job market. At every crisis point, the economic downturn has been less severe than in other industrialized economies, and recovery has been faster. Between 2005 and 2020, the canton recorded an average annual growth rate of 2.4%, while Switzerland grew by 1.8%, the USA by 1.5% and the eurozone by 0.7%.

Other numbers that can testify for this phenomenon: in July, the now former Vaud-based start-up Sophia Genetics, based in Saint-Sulpice (VD) near the Swiss Federal Institute

of Technology in Lausanne (EPFL), where it was founded, successfully completed its initial public offering on the Nasdaq stock exchange, raising \$234 million and achieving a market valuation of \$1.1 billion. In August, Astrocast, another EPFL company developing a network of nanosatellites for the Internet of Things, entered the growth segment of the European operator Euronext. Although the Covid-19 crisis has affected some Vaud-based start-ups, this fabric remains very much alive.

Five years after “Vaud – The Discreet Tiger”, the Vaud Chamber of Commerce and Industry (CVCI), the CREA Institute of Applied Economics at the University of Lausanne’s HEC Faculty, and the BCV’s Observatoire de l’économie vaudoise wanted to reassess the situation. While the previous study focused on economic developments from the early 1990s – a difficult decade with unemployment rates approaching or exceeding 7% in the canton between 1993 and 1997 – to the beginning of the 21st century, this study examines the evolution of the Vaud economy during the crises we have witnessed over the past 15 years.

This study uses 2005 as its initial point of reference and dedicates one chapter to each crisis episode, in order to gain a better understanding of the specific factors that enabled the canton of Vaud and Switzerland to recover from it. The chapters are preceded by a synthetic overview of the development of the Vaud economy between 2005 and 2020. The penultimate chapter highlights how the various sectors and industries have grown, each in its own way, and the final chapter closes with a look at future challenges. A wide range of data sources were used, in particular Statistique Vaud, the Federal Statistical Office, other federal agencies, and the International Monetary Fund. The main source of data for the analysis of the evolution of employment and value added of the different industries is CREA.

## Here are the main results:

1. In fifteen years, Vaud’s GDP has grown by 41.9% – or 2.4% per year on average. And this despite going through the subprime crisis, the eurozone crisis, the abandonment of the minimum EUR/CHF exchange rate, the trade war and the Covid-19 crisis. Employment grew by 31.0% between 2005 and 2020, an annual average of 1.8%.

2. The growth rates recorded by the Vaud economy are higher than those for Switzerland as a whole (GDP: +29.7%, employment: +19.9%). Nor did the USA do better (GDP: +27.9%, employment: +6.1%), or the eurozone (GDP: +10.9%, employment: +9.5%). Only high-profile economies, such as Israel (GDP: +71.6%, employment: +51.4%) or Luxembourg (GDP: +48.6%, employment: +58.5%), were able to achieve a better result.
3. During these fifteen years of recurrent global crises, many countries have seen their public debt rise because of government economic support measures. The 100% of GDP mark has often been approached, or even exceeded. Switzerland has gone against this trend, with public debt falling from 55% of GDP in 2005 to less than 50% in 2020. As for the canton, its total debt (including municipalities and the federal government's share of debt in proportion to population) has fallen from around 75% of GDP to less than 50%.
4. The chemical-pharmaceutical industry in Vaud has played a leading role in the development of the canton's economy over the last fifteen years. Its value added has increased sixfold, and employment by 1.9. This industry includes both long established companies such as Debiopharm, Ferring or Merck, and start-ups such as AC Immune or Sophia Genetics. The weight of this industry went from 3.1% of Vaud's GDP in 2005 to 5.9% in 2020, and from 0.9% to 1.3% in terms of employment.
5. The other areas of the secondary sector showed contrasting developments. Transportation equipment manufacturing benefited from the production of around 60 double-decker train sets by Bombardier Transportation in Villeneuve. The food industry was also able to grow, mainly because of the success of the Nestlé Group's Nespresso subsidiary. On the other hand, the machine industry and the production of precision instruments have felt the adverse winds of the recent past. The construction segment, meanwhile, has made a positive contribution.
6. The main driver of growth between 2005 and 2020 was the tertiary sector, which contributed to three-quarters of the increase in GDP over this period. In particular, business services, the public and parapublic sector, and retail have seen significant increases in their added value over the past decade and a half.
7. Business services and real estate activities increased their value added and related employment by half. However, the trend was less strong after the subprime crisis than in the years leading up to it, as companies continued to face some uncertainty about the global economic situation and, in particular, the difficulties of the eurozone.
8. In public and parapublic services (increase in value added and employment from one quarter to one third), we can observe three main trends: the growth of the education system, the development of the health care system and the increase in social spending. Developments in other areas of public sector activity (administration, security and justice, etc.) mostly reflect the increase in the population.
9. The trends in the other service sectors are more varied. Retail has grown as a result of population growth, despite the slowdown caused by the development of e-commerce. Financial services in Vaud benefited from being mainly oriented towards the domestic market. Telecommunications and IT have benefited from the rapid progress of digitalization. In 2020, logistics services suffered from the temporary halt of some companies and the reduced activity of some industries. For the hospitality industry, the year 2020, marked by the Covid-19 crisis, months of restaurant closures and the collapse of international tourism, was the worst of a series of complicated years.
10. The competitive position that Vaud's economy built-up after the 1990s crisis, mainly based on the development of high value-added activities, has proven to be strong despite the shocks of the last 15 years. By continuing to ensure that framework conditions promote competitiveness, while incorporating the necessary adjustments in response to current challenges (climate change, digitalization, relations with the European Union, the international economic environment, etc.), the canton should be able to sustain its dynamism and pursue its further development.

# Fifteen Years Marked by a Series of Crises

The subprime crisis inaugurated a period of repeated crises, the latest being the Covid-19 one. The Swiss and Vaud economies have navigated through these crises without too many bumps in the road, proving to be more resilient than many industrialized regions. Unemployment has remained low – despite inevitable fluctuations – public finances have remained sound, and growth between 2005 and 2020 has been solid.

## From the Subprime Crisis to Covid-19

A cocktail of unusual crises: that is what the Vaud economy has had to swallow over the past 15 years. Just as the world economy seemed to be on the road to steady growth after the tech bubble burst at the turn of the century, a new word made its appearance in 2007: subprime.

Within a few quarters, the issues deriving from these mortgages – granted in the United States to bad – credit borrowers who could no longer meet

their mortgage payments as the U.S. housing market faltered – turned into a global economic and financial crisis.

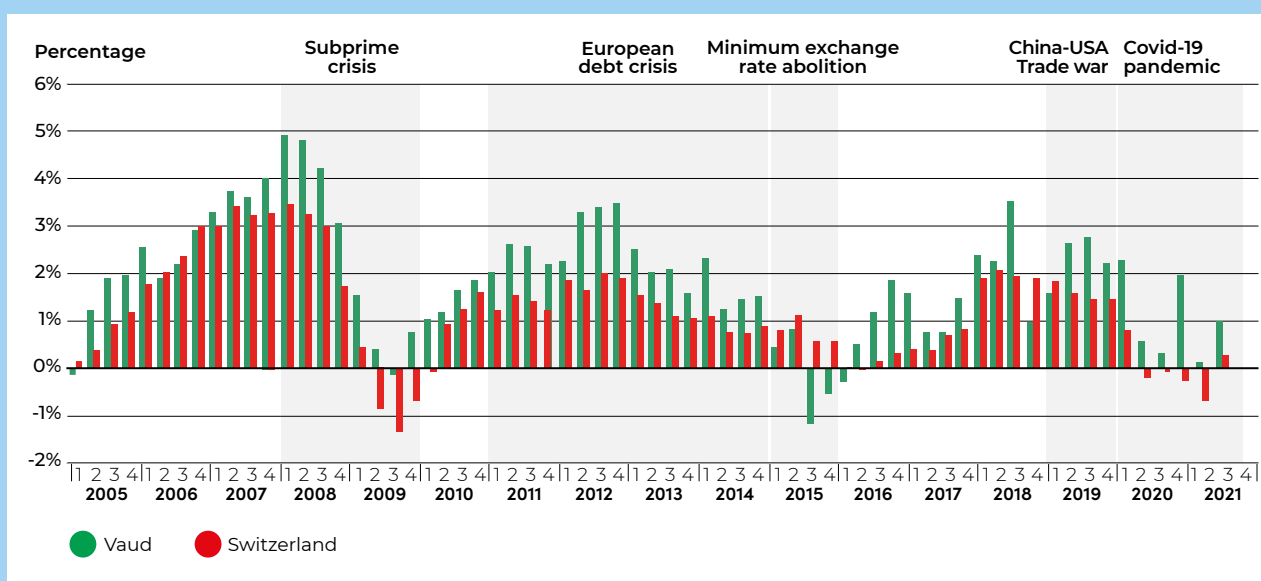
The collapse of the Lehman Brothers investment bank in 2008 was followed by a global recession. Then, the Greek crisis turned into a eurozone crisis, while Switzerland experienced a surge in the value of the Swiss franc. The pressure was temporarily relieved when the Swiss National Bank (SNB) introduced a minimum exchange rate for the euro in 2011. The abandonment of this exchange rate floor in 2015 came as a shock, as did the trade war – to a

lesser extent – and, finally, the Covid-19 crisis in 2020. The Vaud economy has had to overcome all these obstacles.

It appears that the canton has succeeded in doing so, as evidenced by the fact that the number of jobs in the canton rose by more than 30% between 2005 and 2020. This means that, despite repeated crises, the Vaud economy has continued to create jobs, even more than Switzerland (+20%) and the average for developed countries (+10%). Not always at the same pace, and sometimes with breaks, such as during the crisis caused by the collapse

Fig. 1

Annual change in the number of EPTs



Note: Number of full-time equivalent jobs in the secondary and tertiary sectors, according to the Employment Statistics. Change compared to the corresponding quarter of the previous year, by quarter. Sources: Federal Statistical Office, Statistique Vaud

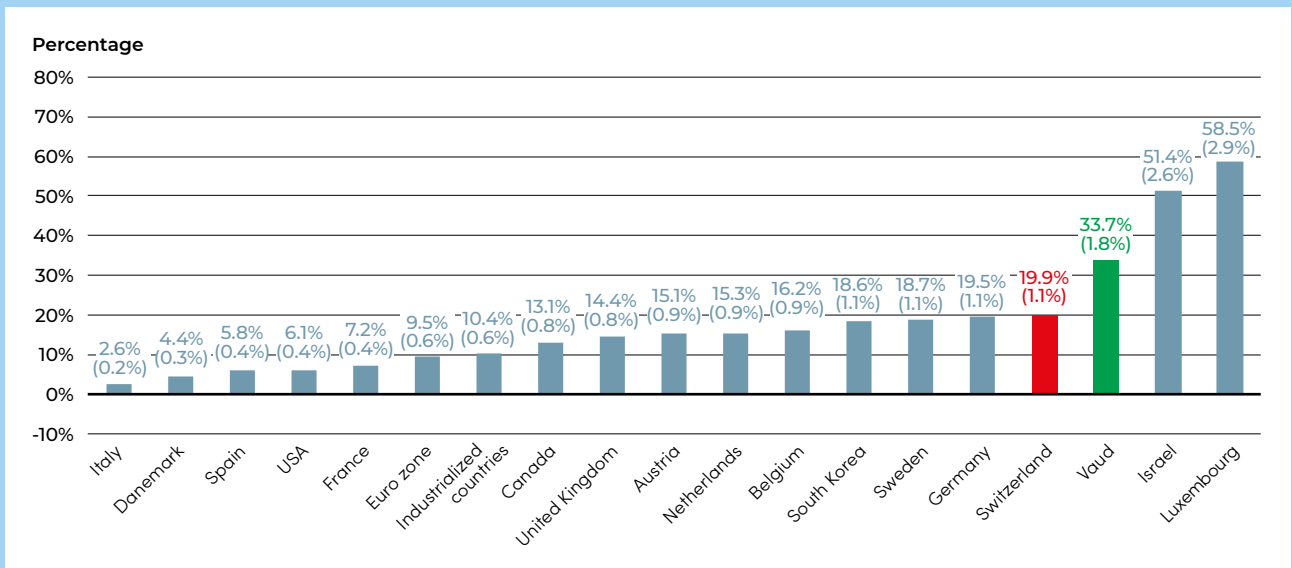


of Lehman Brothers, after the euro exchange rate floor was abandoned, or at the start of the Covid-19 crisis.

In addition, the canton entered the turbulence zone with a low unemployment rate – 5,3% in 2005 (3,8% for Switzerland as a whole). Although the unemployment rate increased

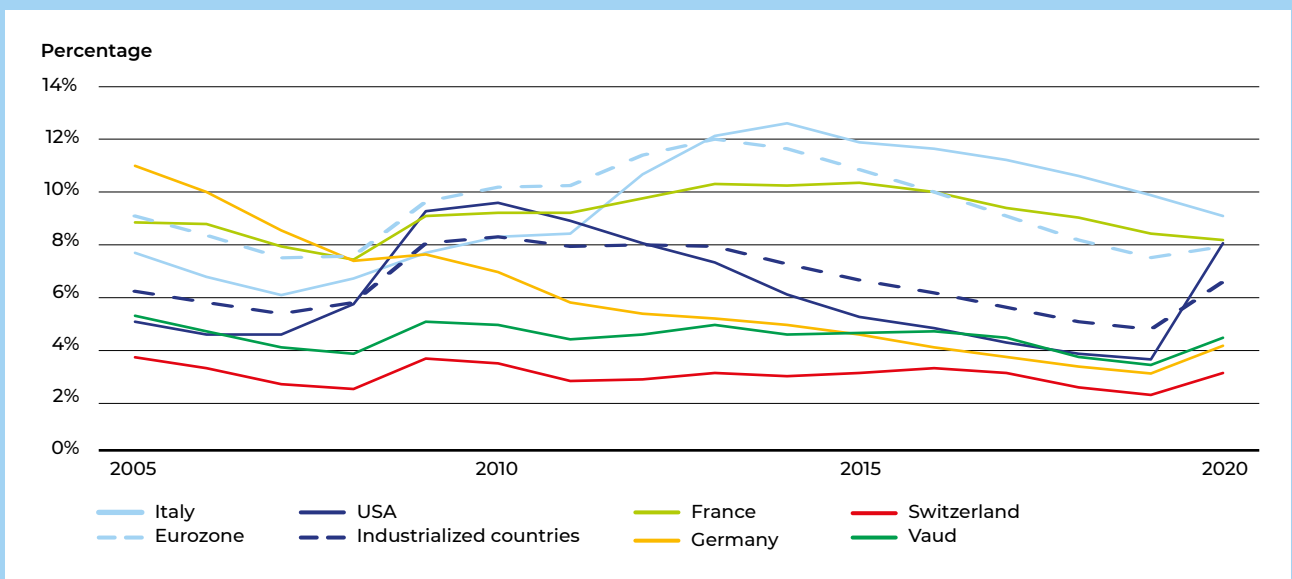
during certain episodes of economic tension, it remained generally low, averaging 4.5% between 2005 and 2020 (Switzerland: 3.1%). In particular, during the Covid-19 crisis, the massive recourse to short-time working prevented a rise in unemployment. And, over time, the canton has shown great resilience.

### Employment evolution between 2005 and 2020



Note: For a selection of countries and groups. Cumulative growth and annual averages in parentheses. Sources: Swiss Federal Statistical Office, CREA, International Monetary Fund.

### Unemployment rate evolution



Note: For a selection of countries and groups. Annual averages. Different calculation basis for Vaud and Switzerland: without taking into account unemployment and social assistance, the difference between the canton and the national average would be 0.8%, not 1.2% (August 2021). Sources: International Monetary Fund, State Secretariat for Economic Affairs

Fig.2

Fig.3

## The Power of a Renewed Economic Fabric

These reports confirm the conclusions of the study “Vaud – The Discreet Tiger”, published in 2016 by the Vaud Chamber of Commerce and Industry (CVCI), the CREA Institute of Applied Economics at the University of Lausanne’s HEC Faculty and the BCV’s Observatoire de l’économie vaudoise. This publication focused on the regeneration of Vaud’s economic fabric after the crisis of the 1990s. It showed that this revitalization had enabled the Vaud economy to get through the major economic and financial crisis of recent years without too much damage.

This evolution was notably linked to the development of activities with high added value. The manufacturing industry, the chemical-pharmaceutical industry, and other industrial branches, such as watchmaking and medical technology, have grown in importance. The canton’s secondary sector has also benefited from the recovery of the construction industry after the real estate bubble burst in the early 1990s. As for the tertiary sector, business services, whether in support activities or specialized activities such as consulting or IT, have also progressed, as have two branches of the public and parapublic sector: healthcare and education.

In addition, the Vaud economy - like the rest of the country - has benefited from very favorable basic conditions. In particular, access to the European market was facilitated by the bilateral agreements signed with the European Union (EU). The economy has also benefited from sound public finances, with a moderate debt burden, significantly lower in proportion with GDP (around 55% in 2005 and less than 50% in 2020 for Switzerland) than other advanced econo-

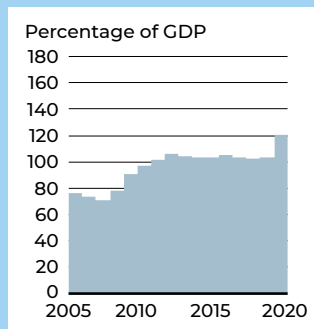
mies. Among the latter, several have seen their debt increase, first after the subprime crisis and then again because of the Covid-19 crisis, pushing their debt ratio close to, or above, the 100% threshold. Its good financial health is therefore another explanation for the canton’s resistance to the crises that have succeeded one another since 2005.

As a result, since the start of the subprime crisis, Vaud’s economy has been able to rely on a dynamic and robust domestic demand, as well as on the solidity of its export industries, which are mainly active in high value-added segments. Domestic demand supported the economy, while the weak demand that export-oriented activities had to face during the crisis periods was, for the most part, temporary.

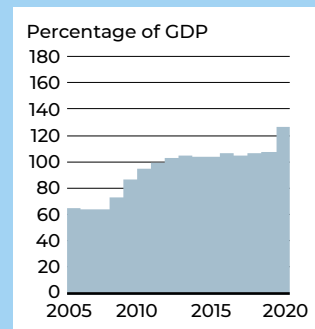
The Covid-19 crisis proved to be an exception to this pattern. The partial lockdown measures of spring 2020 and the protection measures in the quarters that followed also affected many of the activities linked to domestic demand, while exporters were simultaneously facing a global crisis. Despite this reality, the economies of the canton and of Switzerland withstood each period of crisis better than those of other industrialized regions. The recovery phases have also been generally more dynamic.

## Public debt evolution

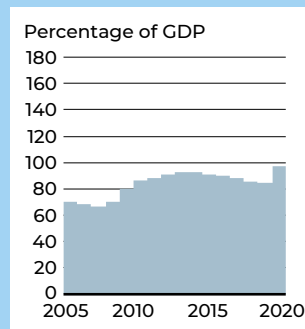
### Industrialized countries



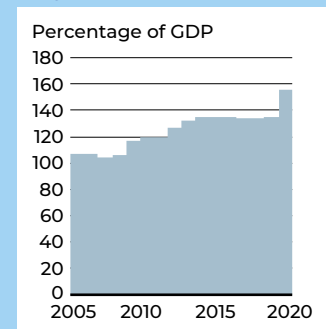
### USA



### Eurozone



### Italy



*Note:* For a selection of countries and groups. Vaud: estimate on a comparable basis, canton and municipalities with allocation of a share of the federal debt in proportion to the population.

## A Strong Increase in GDP Despite the Circumstances

Like employment, the canton's gross domestic product (GDP) grew strongly between 2005 and 2020, by almost 50%. In this area too, the canton's growth rate is higher than that of Switzerland as a whole (+33%), and average compared to developed countries (+23%) or the euro zone (+11%). This can be explained, on the one hand, by an above-average resistance to crises – and therefore by a more moderate impact on growth or recession in the toughest years, such as 2009 and 2020. On the other hand, even in years of modest growth, the country

and canton have seen their GDP grow at a faster rate, on average, than most other developed economies.

This strong economic growth has led to strong population growth. The population of the canton increased by a quarter between 2005 and 2020, faster than that of Switzerland, the average for the euro zone or the industrialized countries. This increase was mainly due to immigration. Although immigration was facilitated by the agreement on the free movement of persons with the EU, it was mainly linked to economic dynamics, as shown by the unemployment rate, which remained low.

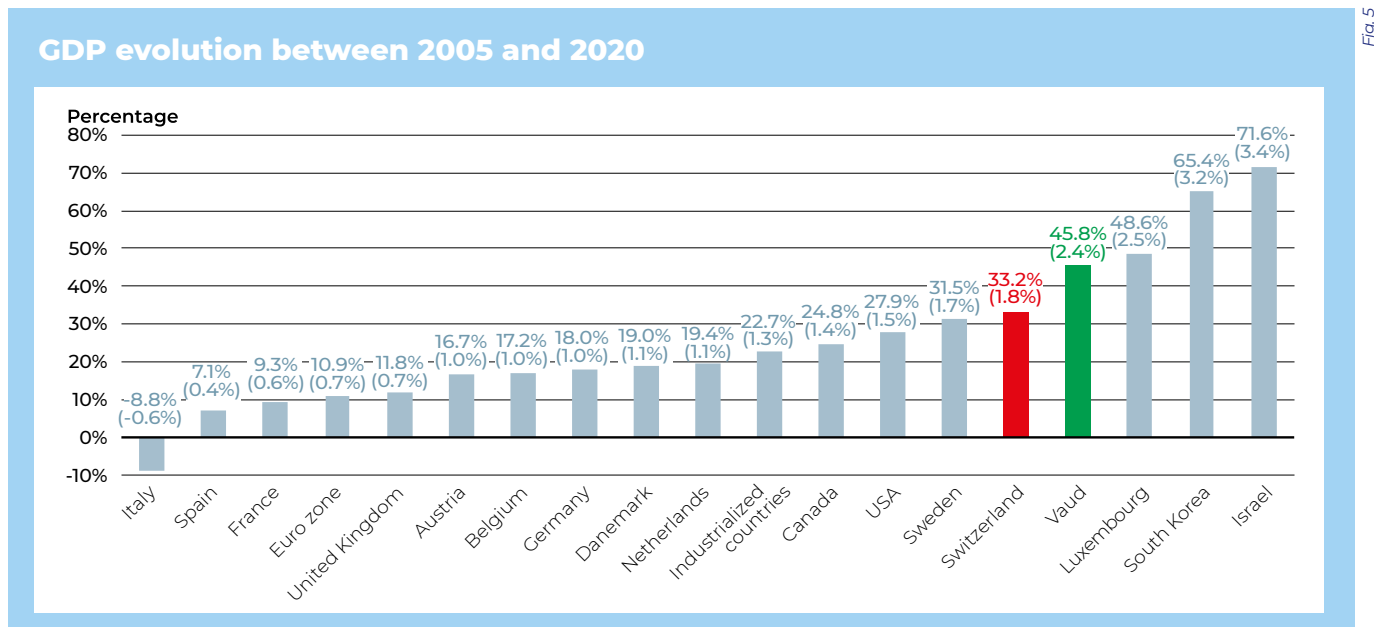


Fig. 5

Note: For selected countries and groups. Cumulative values, annual averages in parentheses. Sources: Federal Statistical Office, State Secretariat for Economic Affairs, CREA, International Monetary Fund

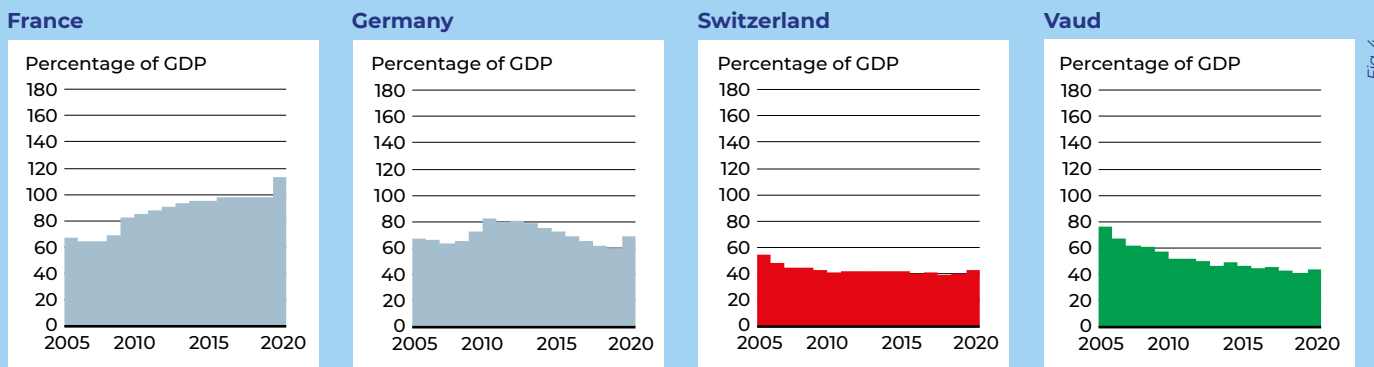


Fig. 4

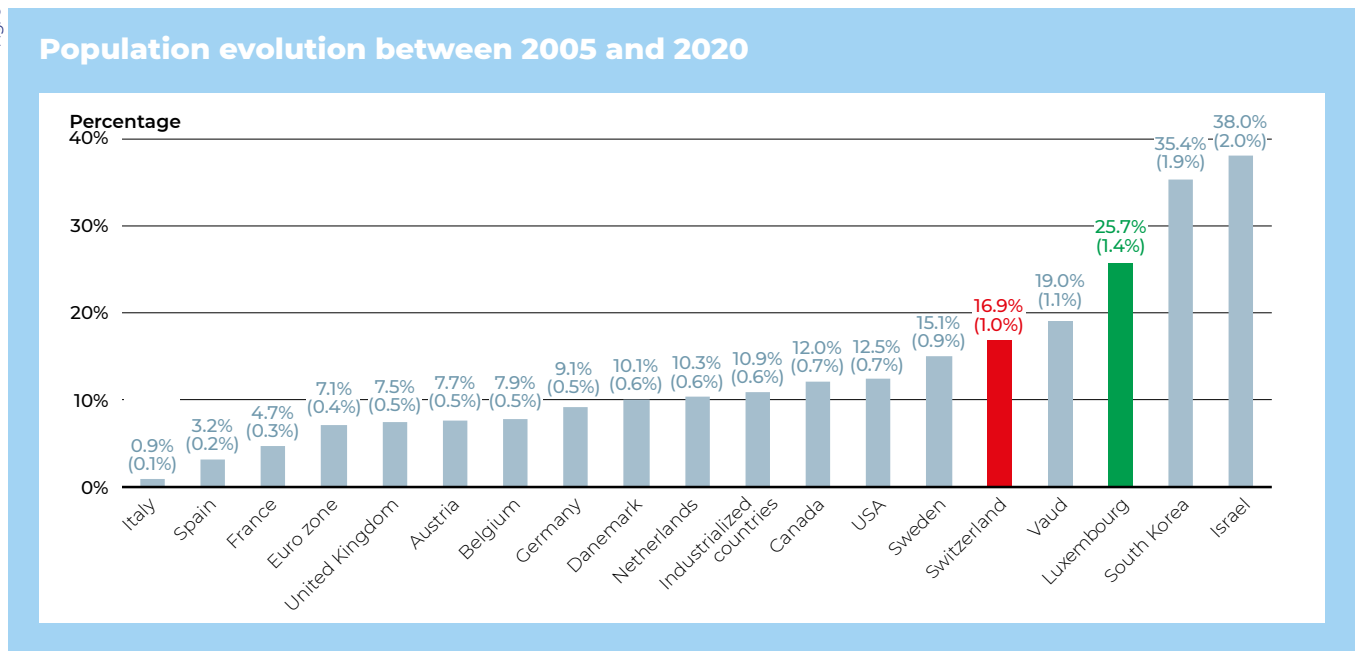
Note: For selected countries and groups. Cumulative values, annual averages in parentheses. Sources: Federal Statistical Office, State Secretariat for Economic Affairs, CREA, International Monetary Fund

## The Rise of the Tertiary Sector

The main driver of this growth has been the tertiary sector, which has contributed to three quarters of the increase in GDP between 2005 and 2020. In particular, business services, the public and parapublic sector, and retail have seen strong increases in their value added over the past decade and a half. In the secondary sector, which accounted for a quarter of the growth over this period, manufacturing activities faced headwinds due to periods of weakness in the European and global economy. However, the sector benefited from the support of the chemical-pharmaceutical industry, which expanded rapidly, and, to a lesser extent, the construction industry, which was stimulated by the demographic dynamic and the construction of new housing in the canton.

Employment in the various industries and sectors has developed in the same direction as GDP, with some nuances. The number of full-time employees increased in the manufacturing industry and in the chemical-pharmaceutical sector, of course, but also in the machine and watchmaking industries, as well as in the food industry. The construction industry has also increased its workforce. In the tertiary sector, although employment has increased only moderately, financial services have been hiring throughout the last 15 years. This despite the obstacles posed by a few periods of high volatility on the financial markets and, above all, by the fall in interest rates, which have partly moved into negative territory. That said, the major employment driving force in the canton can be recognized in business services, as well as in the public and parapublic sector.

Fig. 6



Note: For selected countries and groups. Cumulative growth and annual averages in parentheses. Sources: World Bank, Swiss Federal Statistical Office



## Introduction of the Floor Rate

**September 6, 2011**

Philipp Hildebrand, President of the Swiss National Bank until 2012, announces in Bern the introduction of a minimum exchange rate for the euro, set at 1.20 francs. This measure will make it possible to contain the appreciation of the franc for three and a half years.

## A Preserved Fiscal Competitiveness

Last but not least, during this period, the uncertainties linked to the international discussions on corporate taxation and on certain tax breaks seen as discriminatory were resolved. In 2019, the implementation of the third

Corporate Tax Reform at the cantonal level, and of the Tax Reform and Financing of the retirement pensions (AVS) in 2020 at the national level, allowed the canton of Vaud to consolidate its fiscal attractiveness, with a corporate tax rate lowered from 22.3% to 13.8%. Even though discussions on the taxation of multinationals will resume in 2021, Switzerland and the canton remain well positioned.

## Employment and GDP evolution by industry

	Employment						GDP			
	Number in 2005	Percentage of total in 2005	Growth 2005-2020	Contribution to growth	Number in 2020	Percentage of total in 2020	Percentage share in 2005	Growth in added value 2005-2020	Contribution to growth	Percentage share in 2020
Primary sector	10 824	3.8%	-15.2%	-0.6%	9 182	2.4%	1.4%	2.4%	0.0%	1.0%
Food, textile, leather, wood, paper	9 875	3.4%	4.3%	0.1%	10 296	2.7%	3.3%	2.3%	0.1%	2.4%
Chemistry, pharmaceuticals, rubber, glass, metallurgy...	9 486	3.3%	19.9%	0.7%	11 376	3.0%	3.8%	245.9%	9.3%	9.2%
Machinery, equipment, watchmaking...	15 141	5.3%	15.2%	0.8%	17 448	4.6%	6.2%	-13.2%	-0.8%	3.8%
Production and distribution of electricity and water	3 076	1.1%	29.3%	0.3%	3 977	1.1%	2.9%	-9.4%	-0.3%	1.8%
Construction	21 493	7.5%	35.0%	2.6%	29 010	7.7%	5.4%	18.3%	1.0%	4.5%
Wholesale and retail trade, reparations...	43 313	15.1%	6.7%	1.0%	46 207	12.3%	12.7%	64.2%	8.2%	14.7%
Hotels and restaurants	16 517	5.7%	-7.4%	-0.4%	15 292	4.1%	2.3%	-27.9%	-0.6%	1.2%
Transportation, post and telecommunications, publishing	9 175	6.7%	10.1%	0.7%	21 102	5.6%	6.3%	9.3%	0.6%	4.8%
Financial and insurance services	13 318	4.6%	16.4%	0.8%	15 506	4.1%	7.2%	36.0%	2.6%	6.9%
Real estate and business services...	45 975	16.0%	61.8%	9.9%	74 392	19.8%	23.3%	43.9%	10.2%	23.6%
Public administration, health, education, sports...	74 430	25.9%	58.4%	15.1%	117 929	31.3%	25.4%	42.0%	10.7%	25.4%
Other services	4 800	1.7%	1.7%	0.0%	4 881	1.3%	1.0%	20.3%	0.2%	0.9%
Primary	10 824	3.8%	-15.2%	-0.6%	9 182	2.4%	1.4%	2.4%	0.0%	1.0%
Secondary	59 071	20.6%	22.1%	4.5%	72 108	19.1%	20.7%	47.1%	9.7%	21.5%
Tertiary	217 527	75.7%	35.8%	27.1%	295 309	78.4%	77.9%	41.3%	32.2%	77.6%
<b>Total</b>	<b>287 422</b>	<b>100.0%</b>	<b>31.0%</b>	<b>31.0%</b>	<b>376 599</b>	<b>100.0%</b>	<b>100.0%</b>	<b>41.9%</b>	<b>41.9%</b>	<b>100.0%</b>

Fig. 7

**Note:** The contribution is the share of growth attributable to an industry or group of industries. The sum of the contributions gives the total growth. GDP and value added: in real terms. **Sources:** Federal Statistical Office, State Secretariat for Economic Affairs, CREA

## Under the Magnifying Glass

### Strong growth in the Public and Parapublic Sector

Between 2005 and 2020, the canton of Vaud created the most jobs in the public and parapublic sector, in terms of the share of total employment. With an increase in the number of full-time employees of 58.4% between 2005 and 2020, the share of this branch group in the total has risen from 25.9% to 31.3%.

In comparison, the increase was 44.3% in Switzerland as a whole, with the share of jobs in the public and parapublic services rising from 21.6% to 26.1%. In the canton of Zurich, which is comparable to Vaud (similarities: large canton with university, university hospital and polytechnic; differences: headquarters of many national or international companies), the increase was 54.0% and the share of the total rose from 20.4% to 25.1%.

Public and parapublic services include not only public administration and security, but also activities in which the government plays a more or less significant role, for example, as a (sole or significant) actor, principal, or financial contributor. Thus, this domain also includes education, healthcare and social-medical services, cultural, artistic, recreational and sports services, as well as associative activities. Some of the providers in some of these areas are private: for

example, private medical practices and clinics in health care, fitness centers in sports activities, etc.

Public administration and security account for 13% of public and parapublic employment. Education is twice as important, with 27% of the jobs. However, the main area is the healthcare sector, which accounts for 30% of employment. In addition, social and socio-medical activities and accommodation account for around 20% of all jobs. Cultural, artistic, recreational and sports activities, as well as associative activities, account for about 6% of the total.

The contribution of non-public administration and security activities has been increasing for a long time. Between 2005 and 2020, the number of jobs in public administration and security increased by 33.5%. In education, the increase was much higher (+52.7%), while it was even higher in healthcare (+64.2%). The number of jobs in social and socio-medical services doubled. In cultural, artistic, recreational, sports and associative activities, the increase was 70%.

By way of comparison, during this period the population of Vaud increased by 26%. The increase in the number of individuals in the 15-64 age

group was in line with the average, while the increase in the under-15 age group was 16% and the over-65 age group was 37%. Among the latter, the number of people over 95 is almost twice as high as 15 years ago.

## Under the Magnifying Glass

### The Business Services Nebula

Business services (and real estate activities) have become one of the pillars of the Vaud economy in recent decades. While they accounted for around 10% of employment in the early 1990s, their share rose to around 20% by 2020. In doing so, they have become the second most important industry in the canton, overtaking retail (13%).

This field includes about fifteen different areas: computer science, accounting, law, security, building services. In addition, real estate and architectural activities are included. The details are shown below.

The development of these activities was supported by the canton's openness to the establishment of corporate

headquarters after the 1990s crisis, triggered by the collapse of a real estate bubble in Switzerland. Other factors, such as the dynamism of the Swiss Federal Institute of Technology in Lausanne (EPFL) and the fact that the headquarters of the world's leading food company, the Nestlé Group, are located in Vaud, have contributed to the revitalization of the canton's economic fabric and, with it, to the development of business services.

Fig. 8

Noga Code	Classification
62	Computer programming, consultancy and related activities
63	Information service activities
68	Real estate activities
69	Legal and accounting activities
70	Activities of head offices; management consultancy activities
71	Architectural and engineering activities; technical testing and analysis
72	Scientific research and development
73	Advertising and market research
74	Other professional, scientific and technical activities
77	Rental and leasing activities
78	Employment activities
80	Security and investigation activities
81	Services to buildings and landscape activities
82	Office administrative, office support and other business support activities

Source: Federal Statistical Office



## Testimonial

# “In 2015, like many small and medium-sized businesses, we waited until the storm was over and went the extra mile.”

Philippe Cloux, CEO and President of Vaud-based company Importexa SA, has experienced first-hand the ups and downs of the various crises that the canton has faced over the past decade and a half. In this testimony, he looks back on these sometimes-difficult periods



Founded in 1976, Importexa SA specializes in the design of apparel and accessories that convey their client companies' image. For its owner, Philippe Cloux, the different crises have not all struck his company to the same extent. For example, the subprime crisis, which began in 2007, did not affect the company immediately. "2008 was a good year," notes the manufacturer. "We felt the consequences in 2009-2010. We experienced a drop in turnover in the construction industry and sold less workwear. The service sectors (watch-making, Olympic Games, sport events), on the other hand, held up well." The eurozone crisis, on the other hand, had no effect on the company.

This was not the case with the abolition of the minimum exchange rate for the euro on January 15, 2015. Its impact was immediate and powerful. Importexa AG had to cut its margins overnight in order to remain competitive.

"We had large stocks purchased in euros, goods that we had to resell in France. Customers asked for 20% discounts in 48 hours! We lost turnover and margin, it was difficult. It took us two years to recover and adapt. Like many small and medium-sized businesses, we got over it and got through it." The company gradually recovered and enjoyed three years of growth. The trade war launched by US President Donald Trump did not have a negative

impact, thanks to the agreements that Switzerland had signed with China.

After these three good years, 2020 should have been the best year for Importexa AG in a decade. The first quarter was even "fantastic", but on March 13, everything collapsed with the lockdown promulgated by the Federal Council. This brought many sectors to a complete halt, in particular events: the 20KM in Lausanne, the World Hockey Championships in Lausanne, the Summer Olympics, the World Cycling Championships in Aigle, music festivals: all events that generated sales for the company were cancelled or postponed. Nearly 30% of the turnover was thus lost. "We were able to save some of our assets thanks to our connections in China and our factory in Tunisia: we manufactured masks and thus achieved 15% of our annual turnover," explains Philippe Cloux. The company's advantage? Being active in different areas, distributing the risk. As a result, the workwear part of the business did very well.

Last July, as the recovery stemming from international reopenings was gaining momentum, the CEO felt that the market was moving in the right direction and that business was picking up, but his optimism was tempered by one major concern: delivery. Between the increase in raw material

prices and transport costs – the cost of maritime freight increased by 300% in the summer – price increases and delivery delays seemed inevitable. In other words, the start of the school year in August was going to be complex.

"The Covid-19 crisis has highlighted the resilience of the Swiss economy. But it also highlighted a problem specific to our country. While aids such as loans have worked well, they have also increased companies' indebtedness. Companies had to dip into their savings, which means that investments were postponed. In my opinion, research and development (R&D) will suffer, says the head of Importexa SA. Companies have benefited from the compensation for reduced working hours (RHT), but in terms of innovation, the situation has been quite difficult. Universities have received quite a lot of support, while private companies, which also employ engineers, have received little. Switzerland can do better in this area."

In this context, finally, Philippe Cloux condemns the abandonment of the framework agreement by the Federal Council. For him, it is essential to renew relations with Brussels.

"We work with Germany, Belgium and France. Developing markets on the other side of the Atlantic and in Asia is an obvious choice, but our closest partner is still Europe."

# The Impact of the Subprime Crisis and the Global Recession

**At first, the subprime crisis was supposed to be a temporary correction in the US housing market. Instead, it turned into a major financial crisis that led to the worst global recession of the century. Switzerland and the canton of Vaud, however, were less affected than many other industrialized economies.**

## A Global Crisis Originating in the USA

While its consequences were long-term – and are still felt today – and profound, the subprime crisis began quietly. Although there had already been talk in the United States, in 2006, of a slowdown in the housing market and the difficulties of a handful of mortgage finance companies, it was not until mid-2007 that the world felt the first tremors. After a few reports of losses and difficulties affecting financial institutions linked to U.S. mort-

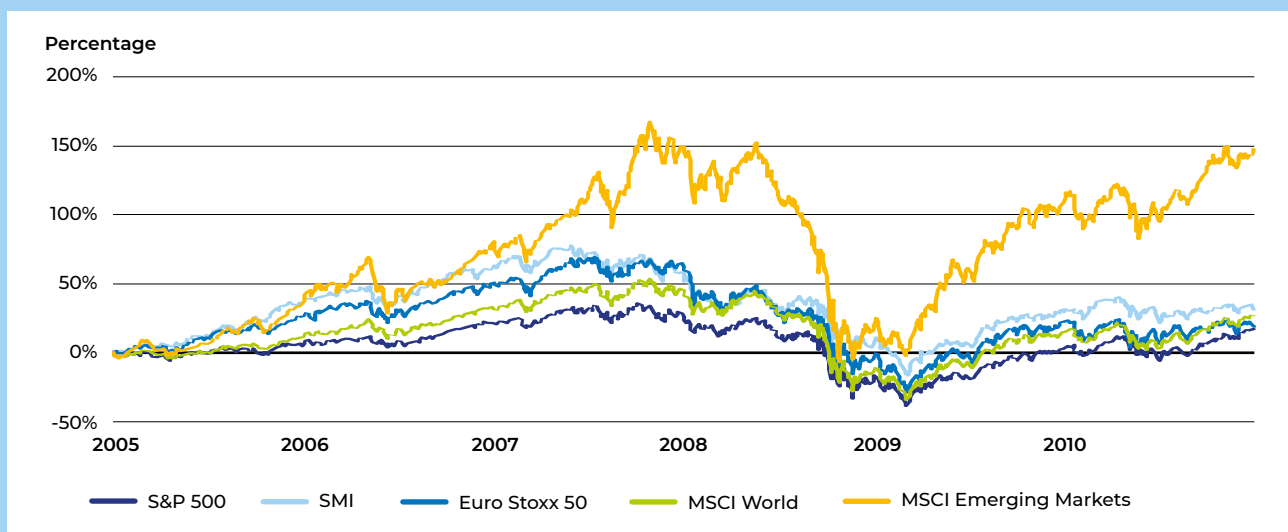
gages, over the summer, announcements began to multiply on both sides of the Atlantic.

This did not immediately trigger a panic: on July 17, 2007, the Dow Jones index on the New York Stock Exchange hit a new record high, crossing the 14,000-point mark. The authorities' words were reassuring: the problem was limited to a specific market segment – mortgages granted to low-income borrowers – and the banking sector was able to absorb the potential losses.

However, as months passed, the dark clouds and loss announcements began to pile up. Central banks began to inject liquidity and ease their monetary policies. In early October 2007, the leading Swiss banking group, UBS, announced 4 billion francs in asset write-downs. It was not alone. A non-exhaustive list of well-known names as well as specialized or regional players: Bear Stearns, Citigroup, Countrywide Financial, Credit Suisse, Deutsche Industriebank, Merrill Lynch, Northern Rock also reported difficulties, to a greater or lesser degree.

Fig. 9

### Stock Market Indexes Evolution



Note: total performance (price and dividend) since 31.12.2004. Source: Thomson Reuters Datastream

In early 2008, events accelerated, and the situation worsened worldwide. Losses were mounting. Many institutions, including UBS and Credit Suisse in our country, proceeded to capital increases. Others received state aid or were nationalized, such as the two American mortgage refinancing institutions Fannie Mae and Freddie Mac. Stock market indexes plunged, banks stopped lending to each other, financial markets became more and more unstable, and only central bank and government measures managed to contain the effects of the financial crisis.

Until that point, the rest of the economy has remained largely unaffected. In the first half of 2008, Swiss exports were still growing strongly and setting a new record. But on September 15, 2008, things changed with the bankruptcy of the US investment bank Lehman Brothers. The announcement shook the confidence of companies around the world. International trade came to a sudden halt, and the world plunged into its deepest recession since the Second World War. Provisions for credit risk increased in already weakened banks, and access to credit became more difficult in some countries.

Industrial giants such as the US car manufacturer General Motors filed for bankruptcy protection. In Switzerland, on October 16, the Swiss National Bank announced that it was taking over a 60-billion-franc portfolio of illiquid loans from UBS, and the Swiss government provided 6 billion francs to the bank. Many governments and major central banks launched new programs to assist the financial industry and support the economy. The economy was thus able to start recovering during 2009.

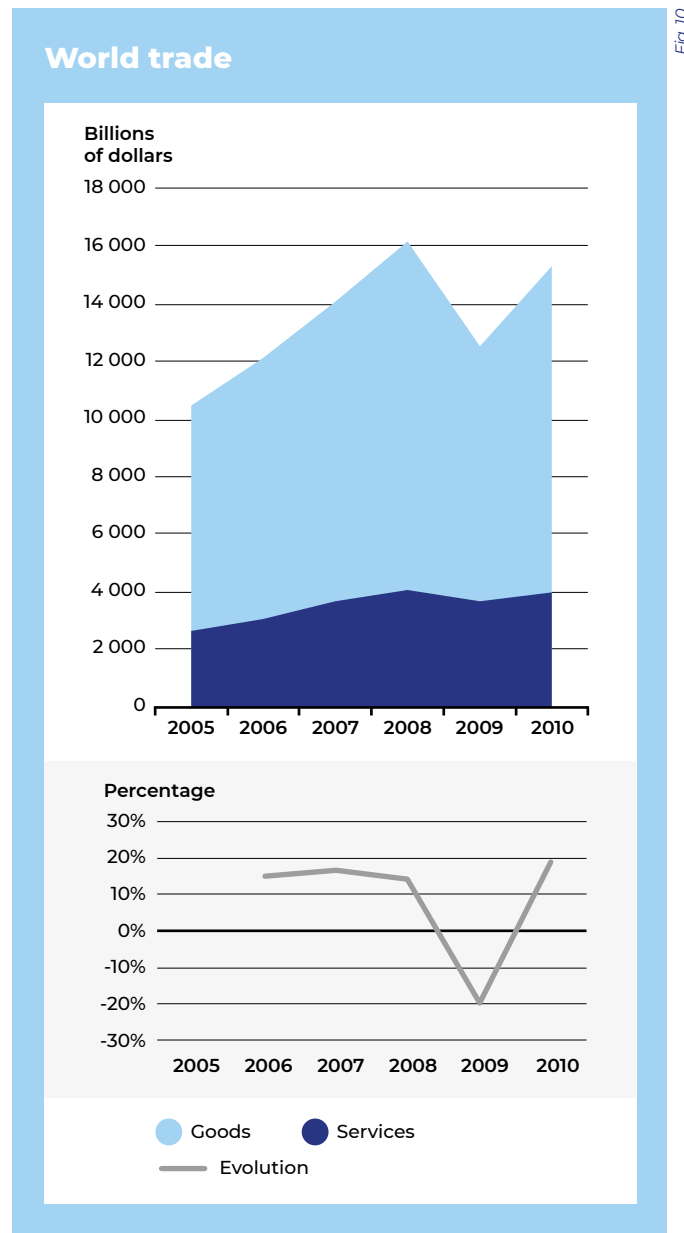


Fig. 10

Note: Exportations mondiales en termes nominaux.  
 Source: Conférence des Nations Unies sur le commerce et le développement

## Under the Magnifying Glass

### A Credit Bubble

How did a relatively small market segment destabilize the global economy to such an extent? Originally, subprime mortgages were intended for low-income borrowers who could not obtain conventional loans because they lacked sufficient collateral. They had a social purpose: to give disadvantaged groups access to the symbol of the American dream: home ownership. It took an extraordinary combination of factors to turn this dream into a nightmare.

The first of these factors were interest rates. After the dot-com bubble burst at the turn of the century and the 9/11 attacks in the U.S., the U.S. Federal Reserve (Fed) kept its key interest rates very low for a long time, which stimulated both the economy and the real estate market. Paradoxically, rising real estate prices allowed a wider audience to become homeowners, thanks to mortgages that were designed for this situation. The payments were low at the beginning and then increased after a few years. This allowed the buyer to meet their obligations for the first few years, while still having time to sell the home at an increased value and pay off the loan – or to secure a new mortgage based on a higher property value and pay off the previous mortgage.

The development of securitization was another essential mechanism. Mortgages did not remain on the balance sheets of the issuing banks, but were pooled into portfolios and sold to various investors in the form of shares. Different classes of shares had different rights to the borrowers' payments: the first shares, which were considered to be of better quality, were the first to be served, and the

last shares were the ones that had to take the losses first. Offering a more attractive return than government bonds, these instruments attracted many investors around the world.

As a result, credit flows increased, not only because of subprime mortgages, but also because of all sorts of other loans or receivables. For example, global outstanding debt, both public and private, doubled between 2000 and 2008, while it had already tripled between 1990 and 2000.

The wheels came off when the Fed raised its key interest rates from 1.00% in 2004 to 5.25% in 2006. This was the beginning of a devastating chain reaction. The real estate market calmed down and prices stopped rising. Gone was the opportunity to sell or refinance on the basis of rising real

estate prices. As a result, more and more subprime borrowers saw their monthly payments increase and late payments began to pile up. In 2007, the number of defaults rose by 79% compared to 2006. This meant that as many homes were foreclosed and put on the market, further exacerbating the decline in the U.S. housing market.

These losses were unexpectedly reflected in the securities backed by these loans, hurting their holders: notably investment funds, but also banks. The domino effect was that other segments of the credit market were sucked into the downward spiral, pushing up the need for valuation adjustments and deepening the losses. This downward spiral dragged down financial markets, and then the world economy, after the Lehman Brothers bankruptcy.

### Banking Industry and House Prices in the United States

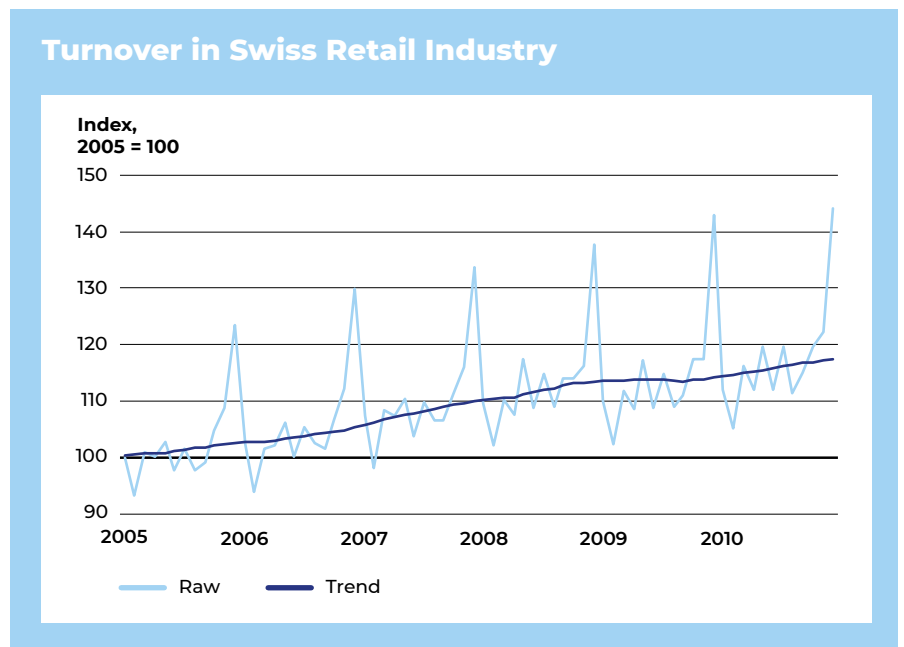


Source: FRED, Federal Reserve Bank of St. Louis

## Switzerland Less Affected Than Others

Switzerland has had its share of difficulties, but these have been less severe than in other countries. Gross domestic product (GDP) fell by 1.9 percent, two to three times less than in the eurozone (-4.5 percent) or among our larger neighbors. Our country also recovered more quickly from the crisis. And, above all, without seeing its public debt soar (see fig. 4 on p. 9). Switzerland entered the crisis with a moderate level of public debt, at around 45% of its GDP, and its debt ratio has not deteriorated since then (it has even fallen slightly). By way of comparison, in 2008 the debt ratio of its neighbors ranged from 65% (Germany) to 106% (Italy), while the average ratio for advanced economies was 77%. In contrast to what was observed in Switzerland, these ratios increased in the years following the subprime crisis.

At first glance, however, Switzerland seemed to suffer from several disadvantages and did not seem to



Note: Data in real terms, adjusted for calendar effects. Trend = 12-month moving average. Source: Federal Statistical Office

have the best assets. The country was more dependent on its financial industry than many others: about 10% of its GDP, compared to the European average of about 6%. Switzerland's two major banks, UBS and Credit Suisse, had been hit hard by the subprime crisis.

Its main economic partners, the European Union and the United States – which account for two-thirds of its exports – went into recession. Finally, the Swiss franc appreciated significantly against the dollar and the euro, adding another drag on exports, which plunged by 12.5% in 2009 compared to the previous year.

## Economic Growth Before, During and After the Peak of the Financial Crisis

For a selection of economies

Fig. 13

	2005	2006	2007	2008	2009	2010	2011	Cumulative growth 2005-2011
France	+1.7%	+2.4%	+2.4%	+0.3%	-2.9%	+1.9%	+2.2%	+6.4%
Germany	+0.7%	+3.8%	+3.0%	+1.0%	-5.7%	+4.2%	+3.9%	+10.2%
Italy	+0.8%	+1.8%	+1.5%	-1.0%	-5.3%	+1.7%	+0.7%	-0.8%
USA	+3.5%	+2.9%	+1.9%	-0.1%	-2.5%	+2.6%	+1.6%	+6.5%
Euro zone	+1.7%	+3.2%	+3.0%	+0.4%	-4.5%	+2.1%	+1.7%	+5.8%
World	+4.9%	+5.4%	+5.5%	+3.0%	-0.1%	+5.4%	+4.3%	+25.8%
Vaud	+3.4%	+4.0%	+4.3%	+3.9%	+0.5%	+4.3%	+2.6%	+21.1%
Switzerland	+3.1%	+4.1%	+4.1%	+2.4%	-1.9%	+3.1%	+2.1%	+14.7%

Note: Growth in real terms, by year and cumulative. Sources: International Monetary Fund, Federal Statistical Office, State Secretariat for Economic Affairs, CREA

In 2010, Switzerland of course indirectly benefited from the economic and financial sector support measures introduced by the authorities, central banks and governments of its main trading partners, through an increase in exports (+7.2%). But Switzerland had also entered the crisis with a revitalized economy after the recession of the early 1990s and the period of slow growth that followed. Its exports have the specificity of being strongly focused on high value-added products, particularly in the chemical-pharmaceutical, watchmaking and machinery industries.

Fig. 12



## Bankruptcy of Lehman Brothers

**September 15, 2008**

New York: an employee of Lehman Brothers takes his belongings with him. Suffocated by the subprime crisis, the investment bank must file for bankruptcy after 158 years of activity. The world economy will plunge into recession.

In addition, domestic demand remained robust, helping to stabilize the economy. Aside from the difficulties of a few large players, the financial system was resilient, with other financial services companies experiencing little or no problems. Consumer spending also proved to be robust. Although retail sales lost some momentum for a few quarters at the peak of the crisis, this proved to be temporary.

### Focus on the Canton of Vaud

In the canton of Vaud, the trend was even more favorable than at national level, with GDP stagnating in 2009 (+0.5%). The secondary sector (8.1% decline in value added) was particularly affected by the difficulties of the machinery and watchmaking industries caused by the global economic shock and the appreciation of the Swiss franc against other major currencies. However, as a sign of the resilience of domestic demand, the construction industry remained solid: its workforce continued to expand, while property prices continued to rise.

Despite the fact that the hotel and restaurant industry was affected by the reluctance of its foreign customers to travel to Switzerland because of the economic situation in their own countries, the tertiary sector (2.9% increase in value added) held up well thanks to the solidity of the domestic economy, notably supported by business services and public and parapublic services.

In 2009, there were two types of industries in the canton: those that got through the year without too much trouble, and those that were caught up in the crisis of confidence that shook the global economy. Short time working rose sharply. In September 2009, a year after the collapse of Lehman Brothers, the number of people receiving reduced working hours (RWH) benefits reached 5,000, equivalent to about 1.4% of total employment: a record high at the time.

The phenomenon was concentrated in a minority of activities: ten sectors accounted for 85% of the people affected by short time working. In some cases and in some months, the proportion of employees affected exceeded 40% or even 50%.

The use of short time working did not prevent the unemployment rate from rising. In the canton of Vaud, the unemployment rate rose from 3.6% in July 2008 to 5.9% in December 2009, corresponding to a 51% increase in the number of people registered with the regional employment offices (ORP). In the rest of Switzerland, the unemployment rate rose from 2.3% to 4.4% (an increase of 72%).

Job creation reached a standstill. However, while some industries experienced temporary job losses, particularly in manufacturing, the strength of the tertiary sector prevented the canton – as well as Switzerland – from experiencing the significant job losses that other economies experienced during the same period.

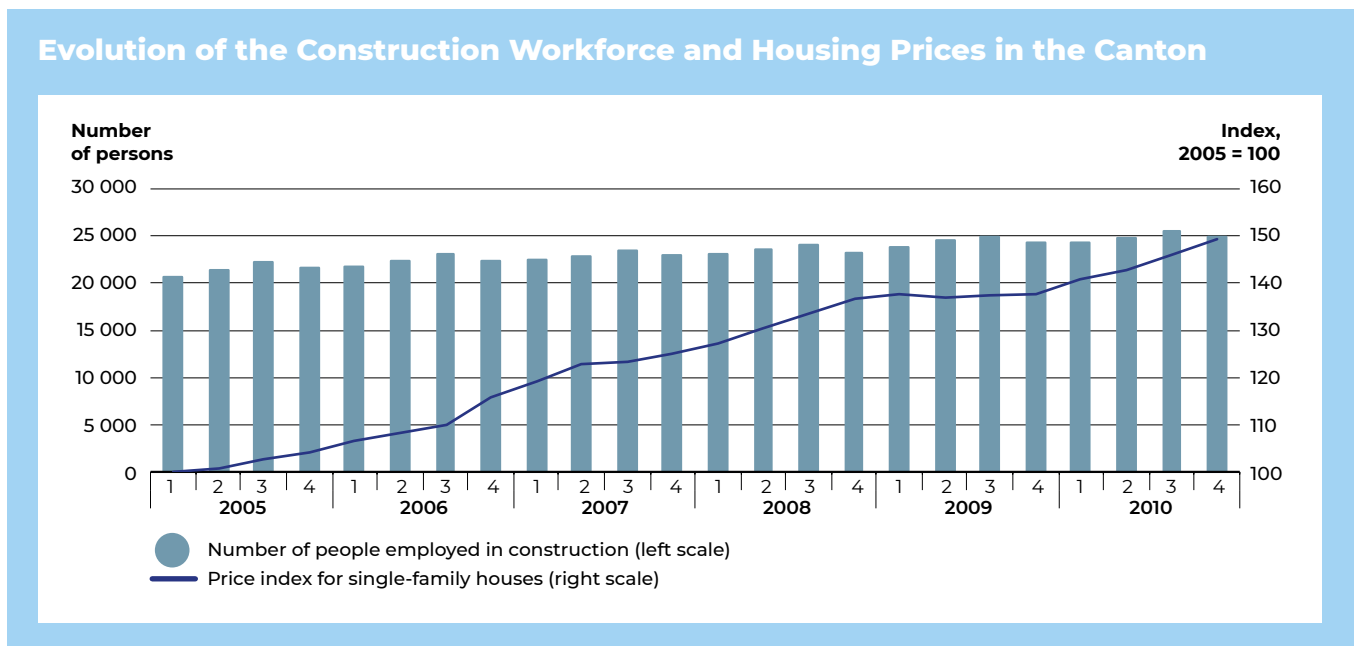


Fig. 14

Sources: Statistique Vaud, Wüest Partner

## Under the Magnifying Glass

### Developments in the Financial Market

Beyond the difficulties of the two largest Swiss banks, the subprime crisis triggered several profound changes in the heart of our financial center. The first collateral effect was the end of fiscal banking secrecy in Switzerland, as in other countries such as Austria, Liechtenstein, Luxembourg and Singapore. Faced with soaring spending to support the economy, many states pressured the countries that had this system to abandon it.

On March 13, 2009, the Federal Council announced its decision to adopt the Organisation for Economic Co-operation and Development (OECD) standards on administrative assistance in tax matters, which was the first step towards the end of fiscal banking secrecy in Switzerland. Requests for mutual assistance would be possible in cases of tax evasion, and not only in cases of fraud or crime. In addition, Switzerland proposed a system of final withholding tax - the Rubik system - allowing to collect the tax due by foreign clients in their country of

residence, while preserving their anonymity. Given the lack of international interest in this system, in 2013 Switzerland announced that it would join the OECD in developing automatic exchange of tax information. The first exchanges took place in 2018.

In general, for the banking industry, regulation has become more detailed in many areas, and not just in relation to taxation: investor protection, capital adequacy, liquidity, etc. The most important element is the “too big to fail” law adopted in 2011 by the Parliament. The term “too big to fail” refers to institutions whose size and central role in the financial system make government intervention mandatory in the event of major difficulties. The objective is to avoid a disorganized bankruptcy and its very serious consequences on the whole economy, thus placing the risk of a costly bailout on the shoulders of the State and taxpayers. The term “systemic” institutions is also used, a category that includes UBS, Credit Suisse, Zurich Cantonal Bank,

Raiffeisen and PostFinance. The main consequences and new regulations include an increase in the minimum capital requirements for the institutions concerned.

Since Vaud does not house the headquarters of a systemic institution and is less focused on cross-border asset management it has been less affected than cantons such as Geneva, Zurich or Ticino, even though the financial institutions it is home to have been affected by these regulatory changes just like all Swiss institutions.



## The 10 Industries Most Affected by Short-Time Working Schemes during the Subprime Crisis

Number of people affected by short-time working compared to the number of jobs in the corresponding industry, average between October 2008 and October 2010

Automotive industry	22.8%
Metallurgy	19.8%
Metal products, except machinery and equipment	9.5%
Computer, electronic and optical products	8.0%
Machinery and equipment	7.4%
Other manufacturing industries	5.7%
Electrical equipment	5.1%
Other transport equipment	4.3%
Tobacco products	5.0%
Printing and reproduction of recorded media	2.1%

Fig. 15

Sources: State Secretariat for Economic Affairs, CREA

## A Rapid Recovery in 2010

After the collapse of Lehman Brothers and the global economic downturn that followed, signs of recovery multiplied during the second half of 2009. Economic indicators improved in most countries and regions of the world. In the canton of Vaud, for example, the indicator for business activity in industry – published by the Vaud Business Climate Commission – began to rise in the summer of 2009.

While 2009 may have been a bad year overall, 2010 saw a strong recovery in most parts of the world. GDP grew by 3.1% in Switzerland and by 4.3% in the canton. The economy benefited from a rebound in industrial activities as well as from a further increase in the dynamism of the tertiary sector. As a result, unemployment and the use of short time working dropped.

However, the relief was short-lived. Inequalities in the nature of the recovery became obvious. In particular, in a eurozone destabilized by lack of dynamism, high debt and high unemployment among some of its members led to the eurozone crisis. And, recovery or not, the Swiss franc continued to appreciate as a refuge currency.

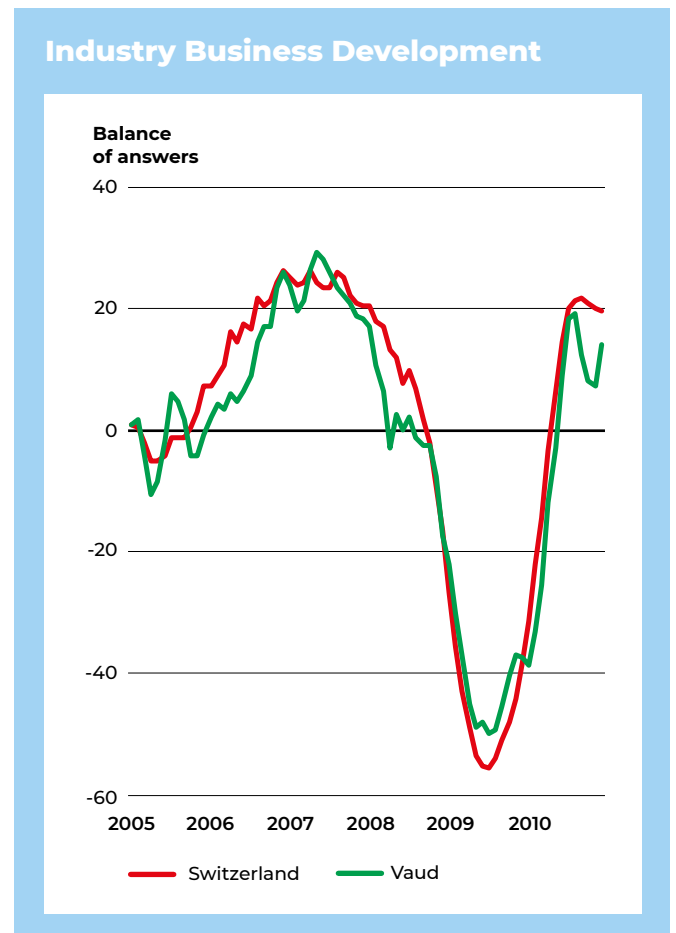


Fig. 16

Note: Calculated according to the balance method: negative response rate subtracted from positive response rate.

Source: Commission Conjoncture vaudoise

# From the Greek Crisis to the Eurozone Recession

**In 2010, Greece's calls for help to deal with its debt burden were only the first episode in a chain reaction that would plunge the euro zone into recession. The surge in the value of the Swiss franc as a safe haven currency led the Swiss National Bank (SNB) to introduce a minimum exchange peg of 1.20 francs to the euro. This measure temporarily mitigated the effects on our economy, of the economic downturn experienced by our main economic partners.**

The European sovereign debt crisis came in the wake of the Greek financial crisis. It emerged against the backdrop of a weakened Europe, with some already heavily indebted countries seeing their public finances undermined and unemployment on the rise. Weakened, the European banking industry was also less capable of contributing to the refinancing of national debts. And this at a time when the financial markets were beginning to question the quality of the bonds of a certain number of States.

It all began in Greece, which in 2010 requested urgent support from the European Union and the International Monetary Fund (IMF) to deal with its debt burden. This led to talks that finally resulted in a bailout. In return, a fiscal austerity policy was imposed. This resulted in an economic slowdown and a vicious circle: the financial markets became nervous about financing heavily indebted countries whose economies were unable to rebound.

This crisis spread to Spain, Ireland, Italy and Portugal, for different reasons and with different measures and rescue plans. However, the entire eurozone was affected, raising doubts among some observers as to the survival of the single currency. The Eurozone plunged into recession in 2012 and 2013, before recovering in the following years.

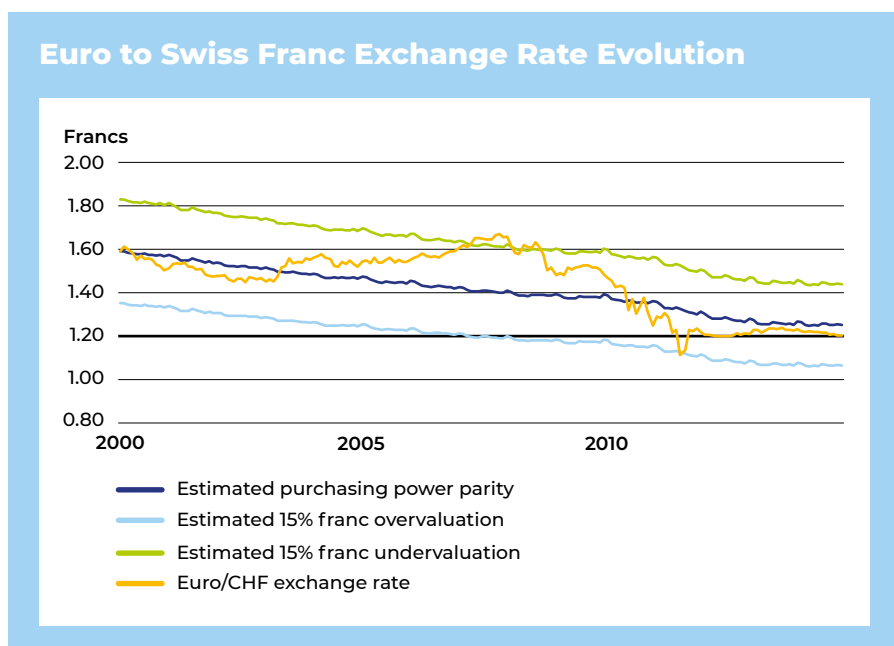
## SNB's Balance Sheet Rises

Switzerland, well-armed with a diversified economy and low public debt, nevertheless became a collateral victim of this crisis. Europe absorbs half of Swiss – or Vaudois – exports, and the deterioration of the economic situation in the eurozone put a brake on that demand. At the same time, the Swiss franc continued to appreciate, which weighed heavily on the wrong side of the scale for the competitiveness of our exports in terms of prices.

This rise of the franc has to do with its status as a safe haven currency. At

the beginning of the century, some economists believed that the Swiss currency had lost this status, while the euro, created at the end of the 1990s, was appreciating. However, since 2008, the Swiss currency had become more and more in demand as a safe-haven asset. This increase in demand caused it to rise steadily, especially against the euro and the dollar.

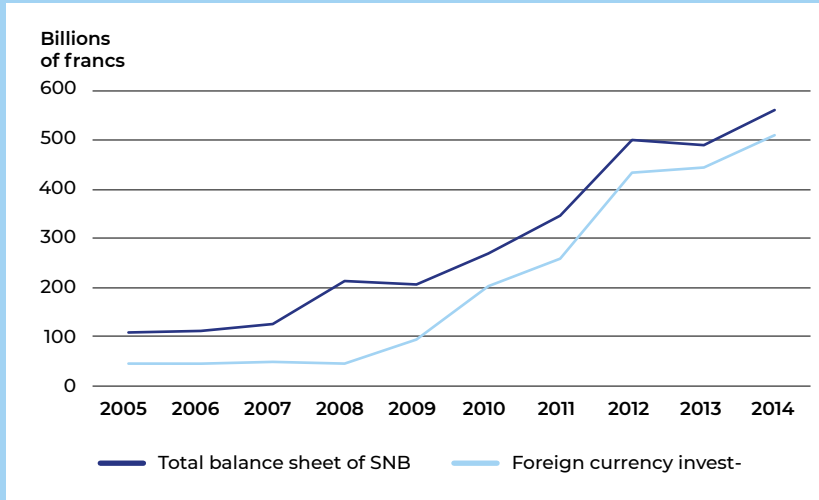
At the end of 2007, the euro was trading at more than 1.60 francs. It had already fallen below 1.50 francs by the beginning of 2010, and below 1.25 francs by the end of 2010. The single currency continued to depreciate and the franc



Source: Datastream Thomson Reuters

Fig. 18

### Changes in the SNB's Balance Sheet and Foreign Exchange Reserves



Source: Swiss National Bank

to rise, until it almost reached parity in the summer of 2011. In response, the Swiss National Bank (SNB) announced on September 6, 2011, the introduction of an exchange rate floor of 1.20 francs for one euro.

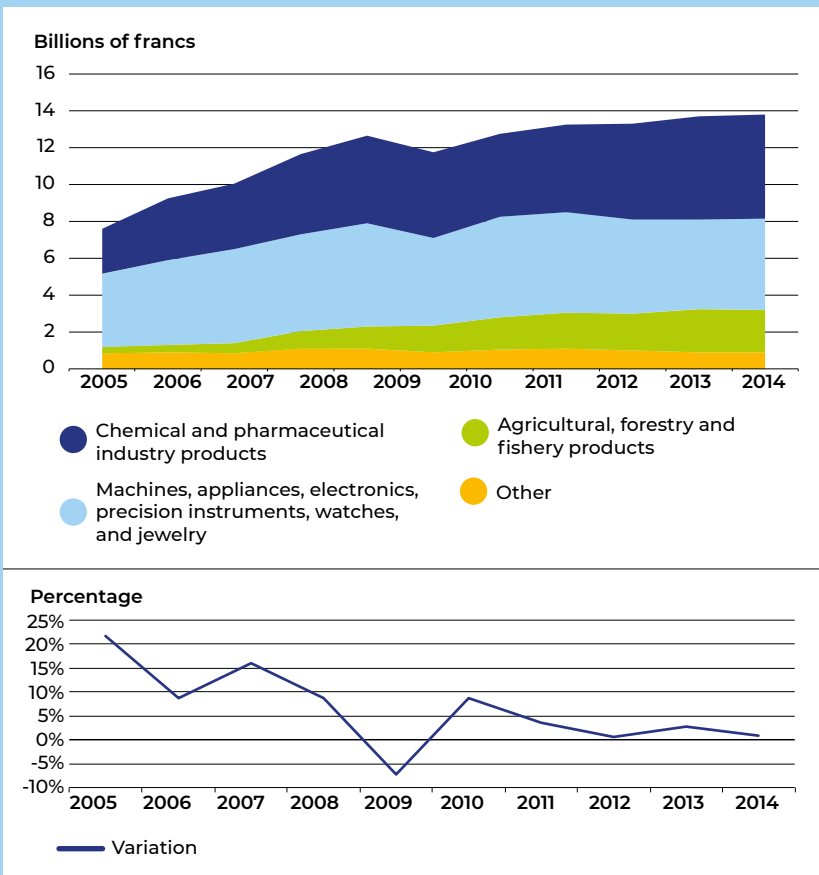
This extremely unusual measure – we have to go back to 1978 to observe a comparable operation, in this case a pegging of the Swiss franc to the German mark – took the form of a massive and continued intervention of the SNB on the currency market. For the SNB, the situation was serious. In its press release of September 6, it wrote: “The current overvaluation of the franc is extreme. It poses a serious threat to the Swiss economy and carries the risk of deflationary pressure. The SNB is therefore aiming for “a substantial and sustainable weakening of the franc” and is prepared to “buy foreign currencies in unlimited quantities”.

As a result, the SNB's balance sheet total, which had already increased by a factor of 2.5 between 2005 and 2010, doubled again between 2010 and 2014 to reach CHF 561 billion. Foreign currency investments increased elevenfold during this period, to CHF 510 billion.

The minimum exchange rate remained in effect for three and a half years and was abandoned on January 15, 2015 (see next chapter), in favor of more targeted intervention on the currency market and the introduction of negative interest rates. While dropping the floor was criticized, the introduction of negative interest rates was also criticized: some experts pointed out the cost of this measure and doubted that the SNB could stay the course. Nevertheless, for three and a half years, this floor protected the Swiss economy from the effects of the upward pressure on its currency.

Fig. 19

### Vaud Exports Evolution



Source: Federal Customs Administration

## A Breath of Fresh Air for Exporters

During this period, industries that had been adversely affected by the rapid strengthening of the Swiss franc, such as the export industry and tourism, were spared the turbulence of our currency exchange rate. Sales of Vaud products abroad, which were already at historically high volume, continued to rise in the years following the 2009 low point, albeit at a lower rate than prior to the subprime crisis.

More generally, the floor rate allowed the Swiss economy to benefit from a certain stability during the eurozone crisis. From 2010 to 2014, Vaud's GDP grew by an average of 2.4% per year. The increase was 2.2% for the tertiary sector and 3.5% for the secondary sector. As for unemployment, after peaking at an average of 5.1% in 2009, it fell to 4.6% in 2014. The number of jobs grew by 11.2% in the canton during these five years, more than in Switzerland (6.9%). And the tertiary sector (+13.7%) proved more dynamic than the secondary sector (+9.8%)

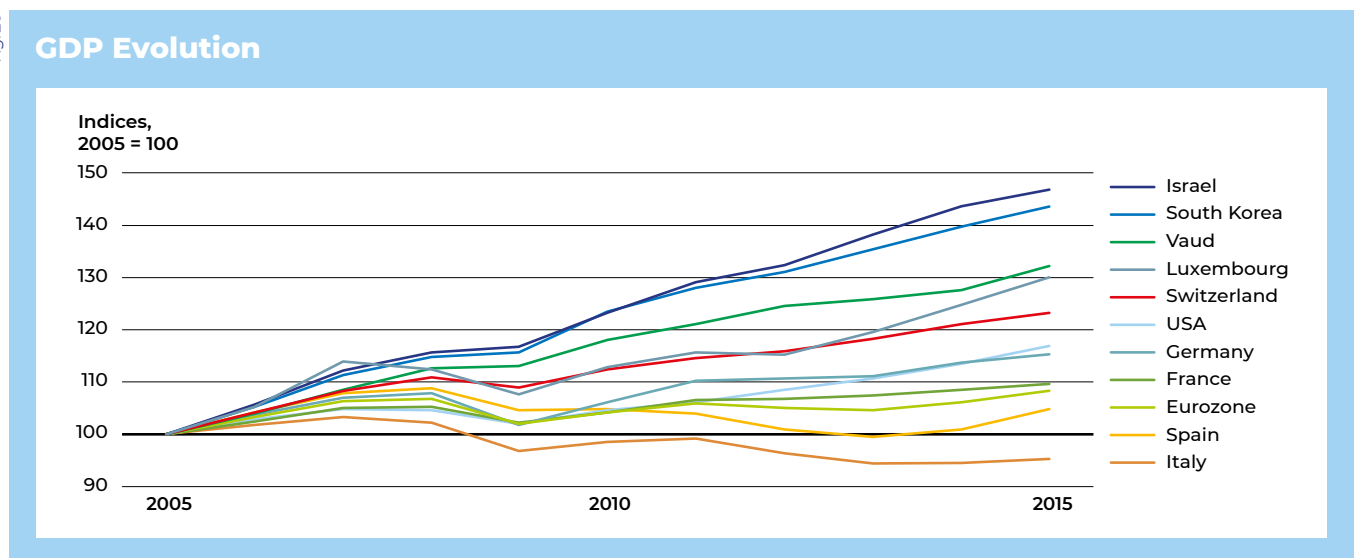
This does not mean that this period was devoid of problems. While the SNB's action was considered reckless by some, it was also criticized by others for being too cautious. The latter argued for a higher floor of 1.30, 1.40 or 1.50 francs to the euro. Beyond these criticisms, many companies have seen their profitability deteriorate. In a survey conducted by the Vaud Chamber of Commerce and Industry (CVCI) one year after the introduction of the minimum exchange rate, it appeared that the strength of the franc remained a problem for 42% of respondents; this rate even exceeded 50% in industry. In addition, one in ten respondents had reduced their workforce and one in twenty had relocated.

## Lack of a Real Recovery in the Eurozone

In Europe, the situation began to ease in 2013, thanks to a renewed control of budget deficits and the beginning of a decline in public debt, the first since 2007. This marked a return to timid growth, but it was still hard to talk about a real recovery, and some countries continued to face a difficult economic and social situation. After the economic plunge in 2009, it took the eurozone seven years to return to its pre-crisis GDP, much longer than Switzerland (two years) or the United States (four years) - in the canton of Vaud, the GDP only stagnated in 2009. Within the eurozone, some countries recovered relatively quickly, such as Germany and France (three years respectively), while the southern countries recovered more slowly, mainly because of their soaring public debt.

To revive the eurozone economy, the European Central Bank was ready to launch an enormous quantitative easing program: in other words, to buy bonds en masse to inject liquidity into the economy and boost economic activity. In addition, the upward pressure on the franc increased again in 2014, and by early 2015 the floor's days were numbered.

Fig. 20



Note: For selected countries and groups. Sources: International Monetary Fund, Federal Statistical Office, State Secretariat for Economic Affairs, CREA



**ΝΑΙ**  
ΣΤΗΝ ΕΛΛΑΔΑ  
ΝΑΙ ΣΤΟ ΕΥΡΩ

**ΝΑΙ**

### Greece in Crisis

**July 3, 2015**  
The Greek population demonstrates before the referendum on the conditions of the international rescue plan proposed to get the country out of the crisis. At the Olympic Stadium in Athens, «Yes» supporters voice their hopes.

# Switzerland Without a “Floor”

**The dropping of the minimum exchange rate of the euro against the franc on January 15, 2015, was a shock to the canton’s economy. The Swiss franc appreciated sharply, weighing on exporters’ sales and margins. However, the focus on high value-added products helped absorb the shock. In addition, service industries held up well, and the canton did not suffer the economic disaster that some people feared.**

January 15, 2015. The day starts like any other. But mid-morning, Switzerland is shaken by a monetary earthquake: the Swiss National Bank (SNB) abandons the floor rate of 1.20 francs for 1 euro introduced in 2011. The president of the central bank, Thomas Jordan, justified the abandonment by saying that the monetary environment was no longer the same: the franc was no longer as overvalued, and had even depreciated against the dollar.

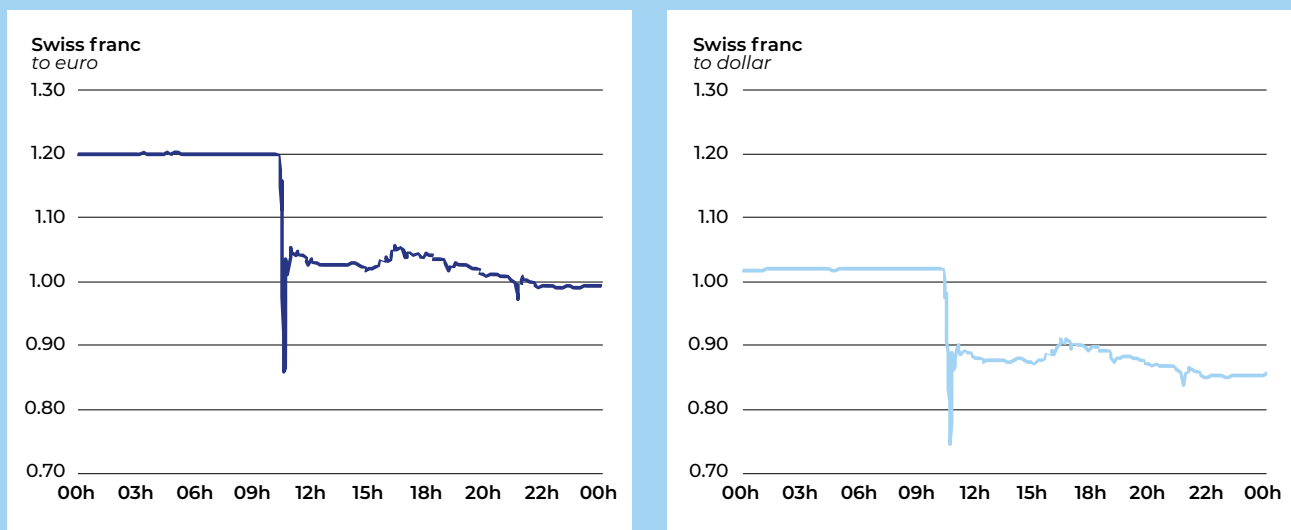
Moreover, this floor was an “exceptional and temporary” measure, which “preserved the Swiss economy from serious damage”, he recalled. “The economy has been able to take advantage of this phase to adapt”. According to Thomas Jordan, Switzerland, thanks to its capacity for innovation and adaptation, was able to cope with a gradual rise in the real exchange rate over a prolonged period. The evidence will prove him right in the long run, even if the economy would not have an easy time adapting.

On January 15, 2015, Thomas Jordan also noted that “the disparities between the monetary policies pursued in the main currency areas have increased sharply recently and could become even more pronounced.” The SNB president may have been referring to the unprecedented quantitative easing program that the European Central Bank (ECB) would launch seven days later.

On January 22, the ECB effectively announced an extension of its asset purchase program to 60 billion euros per month for 18 months and added government bonds to its program. With its massive and sustained injection of liquidity, the European Central Bank wanted to support a eurozone plagued by anemic growth (and high unemployment) which had not yet recovered from the previous crises.

Fig. 27

## Euro and Dollar Exchange Rates on January 15, 2015



## A Sharp Market Reaction

Upon hearing of this abandonment, the financial markets reacted abruptly: the euro immediately fell from 1.20 francs below parity, to 85 cents, before rising again and ending the day slightly below the franc mark. The dollar, which was trading slightly above 1 franc, also fell to less than 90 cents. The franc thus appreciated by 18.9% against the euro and by 16.6% against the dollar. Investors on the Swiss stock exchange were destabilized and share prices fell. The Swiss Market Index (SMI) ended the day down 8.7%, at 8,400.6 points.

In order to curb the appreciation of the Swiss franc, the SNB opted for interventions on the foreign exchange market and the introduction of negative interest rates to make investments in Swiss francs less attractive. Concretely, 0.75% was charged on the portion of financial institutions' assets placed with the SNB in giro accounts that exceeded an exemption threshold. These negative rates were quickly passed on to institutions and large companies. Ten-

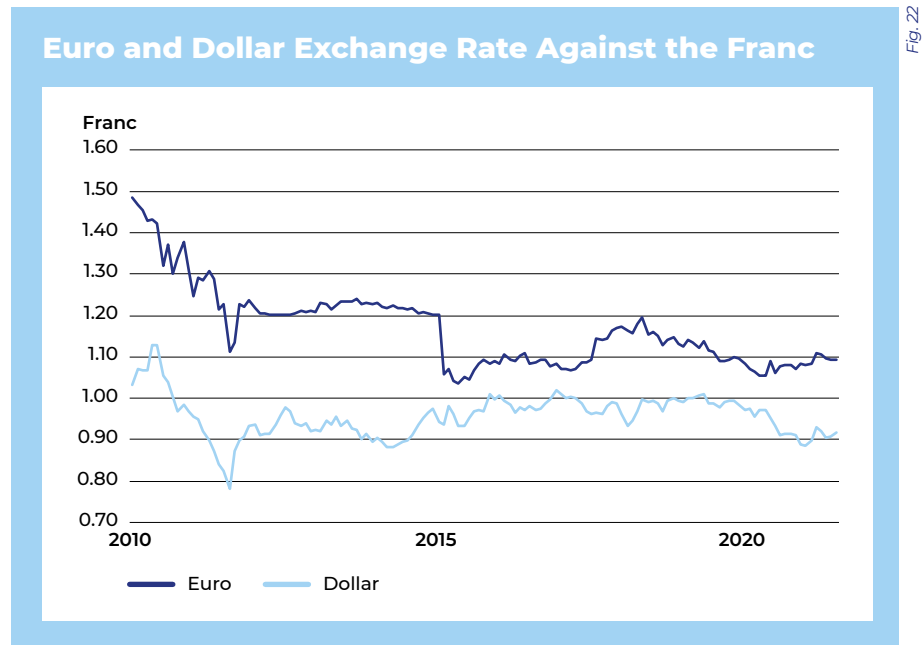


Fig. 22

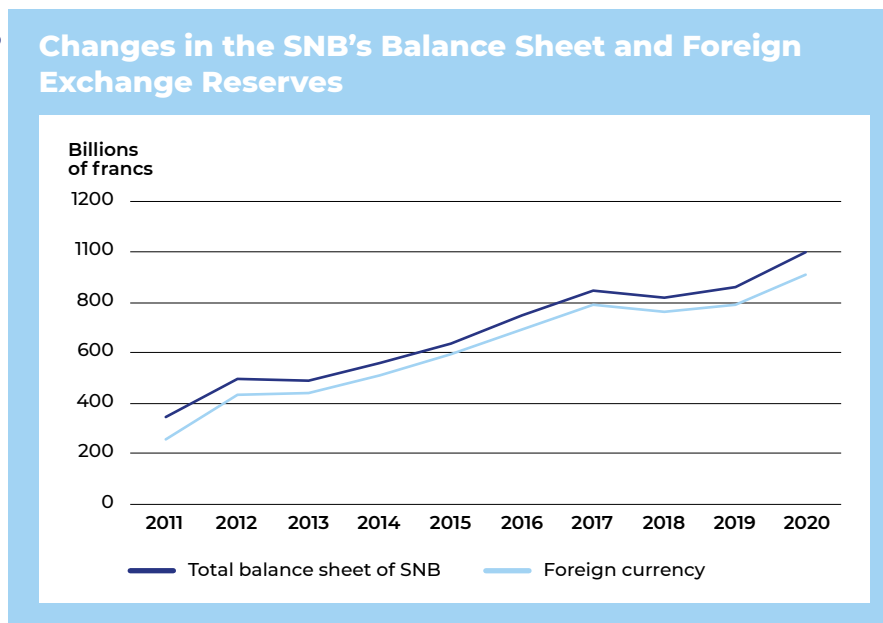
year federal bond yields also plunged below zero.

Thus, owning francs in the form of cash deposited in banks or in government bonds became expensive for the big players. Combined with interventions in the currency market, this helped to relieve the upward pressure on the

franc. In the days and weeks following the initial shock, the franc gradually depreciated: the euro rose towards 1.05 francs and the dollar rose above 95 cents. Equities recovered and made up for their losses in about ten sessions, before continuing their rise. During the following quarters, the euro even continued its slow appreciation, until it approached 1.20 francs in the spring of 2018.

As a result of this strategy, the SNB's balance sheet and foreign exchange reserves kept growing, their size increasing by about 15% per year for several years.

Fig. 23



## End of the Floor Rate

**January 15, 2015**

Thomas Jordan, President of the Swiss National Bank since 2012, explains to the press in Zurich the reasons for abandoning the euro's floor rate against the franc. Despite initial fears, the Swiss economy would withstand the blow.



WEIZERISCHE NATIONALBANK  
QUE NATIONALE SUISSE  
A NAZIONALE SVIZZERA  
CA NAZIUNALA SVZRA  
S NATIONAL BAN



## Negative Effects for 2/3 of the Companies

In an SNB survey from June 2015 on the consequences of the abandonment of the floor rate, two-thirds of the companies surveyed indicated that the impact of the appreciation of the franc was negative (strongly negative for 29% of them and rather negative for 37%). On the other hand, 23% of the companies did not notice any significant impact on their business. For the remaining 11%, the appreciation of the Swiss franc had a positive impact.

There were also significant differences from one business to another. In manufacturing, 85% of companies reported a negative impact, while in services the proportion was 65%. In the construction industry, only 10% of the companies surveyed reported a negative impact, while almost 50% were taking advantage of the opportunities for cheaper purchases offered by the strong franc.

## Affected Exports

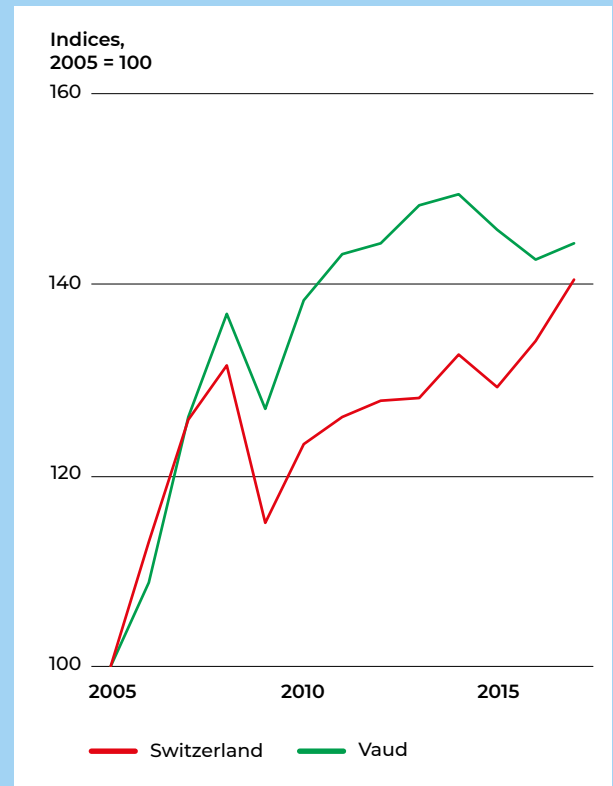
Thus, between companies (and individuals) that benefited from greater import purchasing power and others that had to compete with suddenly cheaper imports or agree to price cuts to remain competitive abroad, the effects were mixed. The retail sector was confronted with an increase in shopping tourism, while the export industry and tourism also saw their competitiveness undermined by the sudden rise in the value of the Swiss franc.

After several years of moderate growth, Swiss exports contracted by 2.6% in nominal terms in 2015, according to data from the Federal Customs Administration (FCA). The decline affected most categories of products, with machinery, watches, pharmaceutical and chemical products being the most affected. For their manufacturers, this meant a decline in sales, largely due to lower export prices. In volume terms, the decline was only 0.9%, the Federal Customs Administration (AFD) reported.

Vaud's exports performed a little bit better. While the decline in total exports was the same as at national level, it was concentrated in chemicals and pharmaceuticals, while machinery and watchmaking managed to increase their sales abroad. Despite this, the pressure on profit margins remained high.

That said, at CHF 202.9 billion and CHF 13.4 billion respectively in 2015, Swiss and Vaud exports recorded their third best results.

## Development of Vaud and Swiss Exports



Source: Federal Customs Administration

## Low Impact on Employment

Fortunately, this monetary storm had only a negligible impact on employment. As a result, the unemployment rate in Vaud went from an annual average of 4.6% in 2014 to 4.7% in 2015. In its 2015 annual report, the Vaud Department of Economy, Innovation and Sport (DEIS) noted that, contrary to what might have been feared, there was no massive recourse to short time working, large-scale layoffs or relocations in the industries concerned. Vaud's economy held up well thanks to its dynamism, diversity, and adaptability.

An example of the resilience of SMEs in a tumultuous context: the CEO of Plumettaz, an exporting Vaud SME (cable-laying machine manufacturer), explained in August 2016, in the Vaud Chamber of Commerce and Industry (CVCI) journal, that with the strong franc, he had had to review his budgets overnight and take quick action. The company was thus forced to reduce its export

margins. However, the company's quick reaction allowed it to survive without resorting to layoffs, salary cuts or changes in working hours.

With regard to reduced working hours, although the number of workers receiving compensation increased by a factor of three and a half compared to 2014 in the canton, peaking at around 750 people in April 2016, it remained far from the peaks seen in previous years. For comparison, following the previous episode of franc appreciation in 2011, up to 1,700 people (April 2012) were affected by short time working. And at the height of the financial crisis in September 2009, more than 5,000 workers were given RHT.

## Industry Support Fund

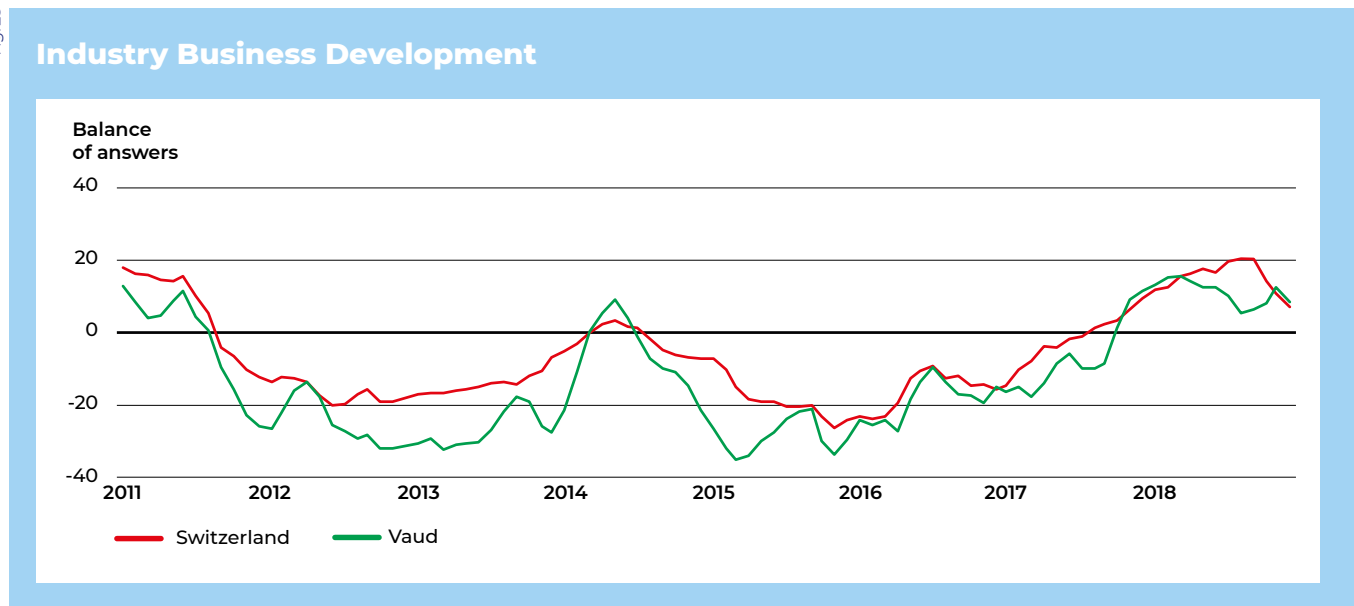
In early 2016, the Canton of Vaud also implemented the Industry Support Fund, which was one of the objectives of its 2012-2017 Legislature Program. The main purpose of the CHF 17.5 million fund was to support investment projects by Vaud-based industrial SMEs, regardless of size or legal entity, with production facilities in the cantonal territory. Some 75 companies received non-repayable grants or guarantees.

The year 2016 also saw the beginning of an easing of the situation. The industry business indicator began to point upwards. Although they were put to the test, exporters were able to acclimatize to the strong franc. In Switzerland, exports returned to growth in 2016 and even set a new record at CHF 210.7 billion, despite a mixed picture across the various branches. Chemicals and pharmaceuticals were the main driving force behind the increase, while machinery lacked momentum and watchmaking was struggling. In the canton, the return to positive figures came a year later, in 2017, with a new record of CHF 13.9 billion.

## Resilient Services

More generally, the economy withstood the shock of abandoning the minimum exchange rate well, thanks to domestic demand which remained robust. While some service activities, such as hotels and restaurants and financial services, were held back, business services and public and parapublic services generally showed appreciable growth rates in 2015 and the following years. Demographics also remained a supportive factor, with the population growing by 1.6% in 2015 and 1.4% in 2016. The service sector thus maintained its role as a pillar of the economy.

Fig. 25



Note: Calculé selon la méthode des soldes: taux de réponses négatives soustrait au taux de réponses positives. Source: Commission Conjoncture vaudoise

# The Trump Era and the Trade War

**The trade war launched by US President Donald Trump – who took office in early 2017 – had a significant impact on global trade and growth. Oriented towards high value-added products, Swiss and Vaud exports have proved resilient. Once again, activities geared towards the domestic market and the tertiary sector supported the economy.**

While the global economy had not yet recovered from the subprime crisis – and the eurozone from its own crisis between 2010 and 2013 – a new unforeseen event came to weigh on the recovery. When he took office in early 2017, the new U.S. president, republican Donald Trump, and his administration launched a trade war with sharp increases in some customs taxes.

China was the main target, but the European Union (EU) was also affected, and Switzerland became an indirect victim of this situation. US taxes on aluminum and steel, and EU retaliatory measures on metals, squeezed the margins of some companies. Supply chains were disrupted, and the prices of certain components increased.

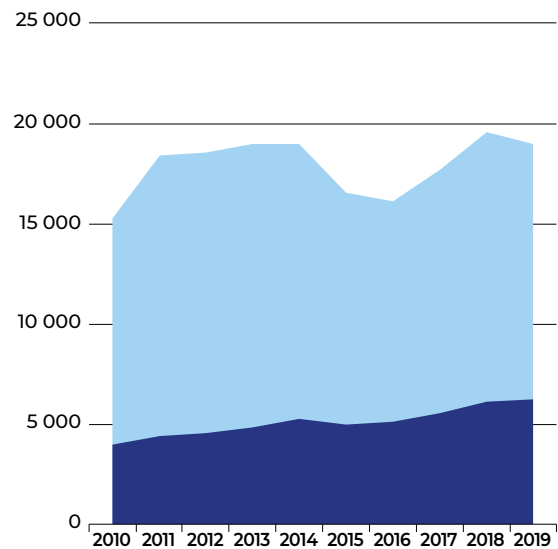
In this climate, business confidence was eroded. Global trade is hampered and, little by little, the economy starts slowing down. From 3.8% in 2017, global growth gradually declined to 2.8% in 2019, the lowest rate since the 2008-2009 global financial crisis, according to estimates by the International Monetary Fund (IMF).

The China-US trade war was not just about taxes. From a strategic point of view, China was displaying its ambitions in artificial intelligence and investing in links that would facilitate its exports. From a monetary point of view, the country was letting the yuan depreciate to support its exports. At 7 yuan to the dollar in August 2019, it hit an 11-year low. The United States accused China of manipulating its currency, and the U.S. Treasury asked the IMF to act.

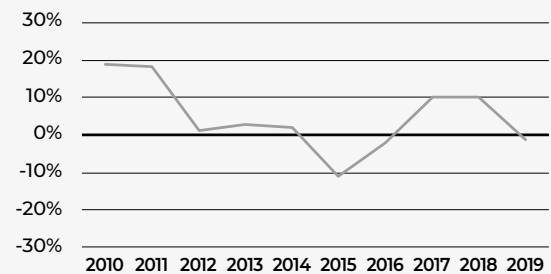
Periods of tension were punctuated by episodes of appeasement and negotiations between Beijing and Washington. Notably, an agreement was signed in January 2020, before tensions rose again. In September, a World Trade Organization (WTO) tribunal ruled against Washington, finding the taxes imposed on China in 2018 excessive.

## World Trade Evolution

Billions of dollars



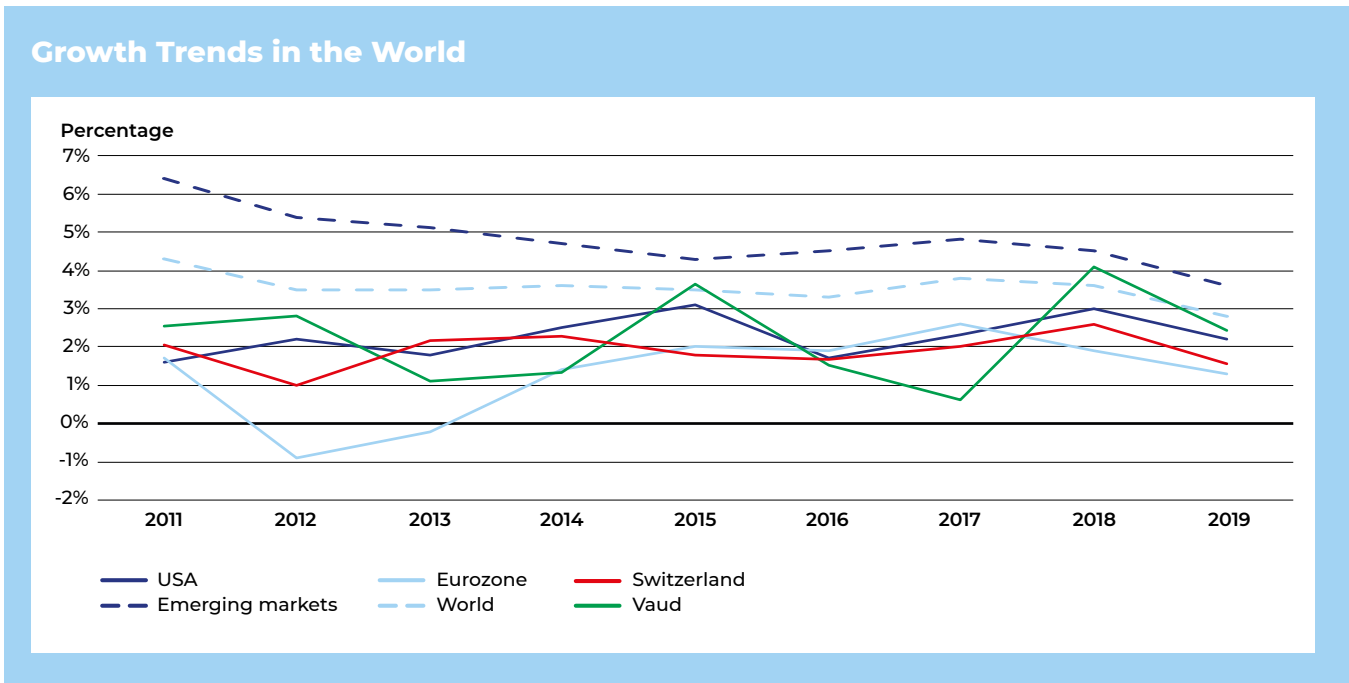
Percentage



● Goods ● Services  
— Evolution

Note: World exports in nominal terms.  
Source: United Nations Conference on Trade and Development

Fig. 27



Sources: Fonds monétaire international, Secrétariat d'État à l'économie, Office fédéral de la statistique, CREA

Tensions remained high during the Covid-19 pandemic, after Democrat Joe Biden took office as US president in early 2021. However, the United States has resumed dialogue with the EU and has set its sights on a new issue: tax competition and the taxation of multinationals.

## Switzerland Resists

Even though Swiss companies export few aluminum or steel products, as well as raw metal, the tensions quickly had an indirect impact on the machinery, electrical equipment, and metals (MEM) industry. Their customers were affected by the tax increase. Even outside of this field, many companies saw prices for certain components rise and the negative trends were real for a wide range of industries, even if they were sometimes weak.

However, as specialists from the Center for Economic Research (KOF) also pointed out back in 2018, Swiss companies were rather well equipped to deal with this rising protectionism. They sell in all regions of the world and are often present in niche markets with high value added. The main

risk was therefore that investment would decline as a result of uncertainty.

In some cases, the U.S. measures have also led to the need to adapt supply chains. Instead of sending components to China for assembly with Chinese parts before shipping the finished product to the U.S., a Swiss company would bring the parts manufactured in China to Switzerland for assembly here, then export the finished product to the U.S. However, for SMEs, which are the backbone of our economy, reorganizing production - or purchasing - to avoid certain taxes was not as simple as for large companies with subsidiaries in different countries. For this reason, the trade war has led to some losses on the sales side, but also to pressure on margins.

At the same time, the Swiss franc depreciated between 2017 and the spring of 2018, with the euro starting at around 1.07 and flirting with the 1.20 franc mark. Nevertheless, it appreciated again from the summer of 2018, against the backdrop of persistent trade tensions. In the end, Swiss growth fluctuated between 1.6% and 2.6% between 2017 and 2019, at a level similar to that of the eurozone, albeit lower than in the United States. Exports remain solid, with growth ranging from 3.9% to 5.7%.

## Trade War

**November 9, 2017**

Against the backdrop of the trade war, U.S. President Donald Trump and his Chinese counterpart Xi Jinping meet in Beijing. Despite the fanfare and handshakes, tensions between the two countries will continue to grow.



## Focus on the Canton of Vaud

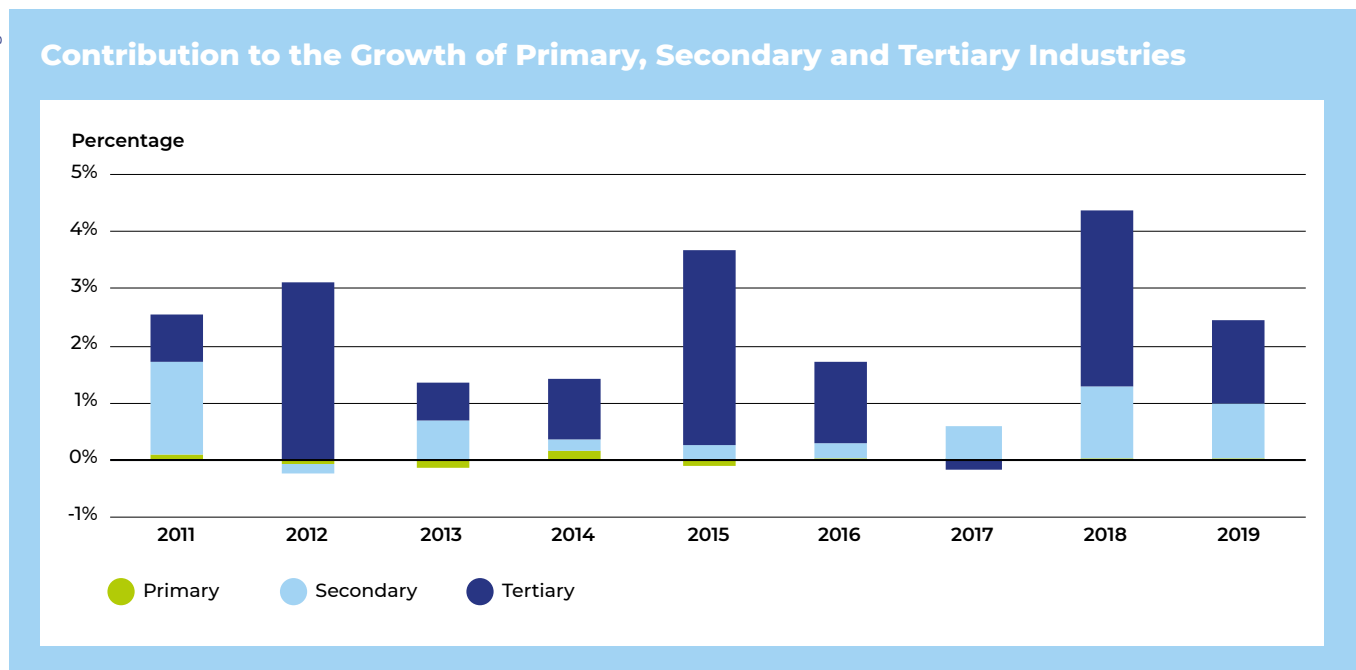
In terms of cantonal GDP, the Vaud economy held up rather well in the face of the global economic downturn and the trade war. Its growth ranged between 0.6% and 4.1% between 2017 and 2019. As for exports, after an increase of 5.5% in 2017, they fell by -0.3% and -1.9% in 2018 and 2019.

In this environment, investment was held back. Overall, the main support for the economy came from the sectors geared towards domestic demand, whose situation was improving after the turmoil of 2015 and the abandonment of the euro floor rate. As of December 2019, the Vaud Business Conditions Commission's assessment of the year showed companies in the services, retail, hotel and restaurant, and construction industries to be generally satisfied with their business performance. In the construction sector, thanks to sustained activity, the number of people employed was even higher than ever.

For the industrial sector, on the other hand, the outlook darkened from the fall of 2018 onwards, as tensions between China and the United States continued. And the Swiss franc had started to rise again. The business situation was deteriorating, and new orders were slowing down. However, the situation differed from one sector to another: the metal and machinery industry, chemicals and plastics, and wood and non-metallic products saw their situation worsen, while electronics and precision engineering considered their business satisfactory.

In summary, the global economic slowdown had a negative impact on the industrial sector, but the stability enjoyed by the retail and construction sectors, as well as the good results in the services and hotel and restaurant industries, balanced out - in the canton of Vaud - the impact of the crisis caused by the trade war and international instability. The "miracle" can be, once again, easily explained.

Fig. 28



**Note:** Contribution to growth by sector: share of annual GDP growth in Vaud attributable to primary, secondary and tertiary sectors. The sum of the contributions is equal to the annual growth. **Sources:** State Secretariat for Economic Affairs, Federal Statistical Office, CREA

# Covid-19, a Pandemic with Unprecedented Consequences

After the subprime crisis, the Covid-19 crisis was the second major shock of the last 15 years. In particular, the closure of so-called “non-essential” businesses and many services in the spring of 2020 plunged the economy into recession. Thanks to financial aid and more flexible health protection measures afterwards, the economy was able to rebound. Switzerland and the canton also suffered less than other industrialized economies.

## An Exceptional Year

While 2019 ended on a positive note for the Vaud economy, despite the economic setbacks for exporters, the slowdown in world trade due to trade tensions and the appreciation of the Swiss franc, 2020 was to be an exceptional year for the canton of Vaud. It was preparing to host the Winter Youth Olympic Games (YOG), part of the World Ice Hockey Championships, as well as the Petanque and Road Cycling Championships. While the YOG were a success, the rest would be cancelled.

A few days before the New Year, health authorities in the Chinese city of Wuhan issued an alert about a new form of atypical pneumonia. Then, events accelerated: China confined more than 50 million people in Wuhan and other cities. Soon,

infections and deaths were reported in other parts of the world. Just named Covid-19, the disease spread like wildfire around the world.

In Switzerland, the first official case was announced on February 25, 2020. Very quickly, the epidemic got out of control. The number of cases increased exponentially, and death numbers started to rise. Major events were banned, the Geneva Motor Show was cancelled, and the number of new daily cases passed the 1000 mark. On March 13, the Federal Council closed the schools. On the 16th, it declared a state of sanitary emergency and closed the country. All public and private events were banned, and all public establishments were closed, with the exception of grocery stores, take-out restaurants, transportation, hotels, banks and post offices.

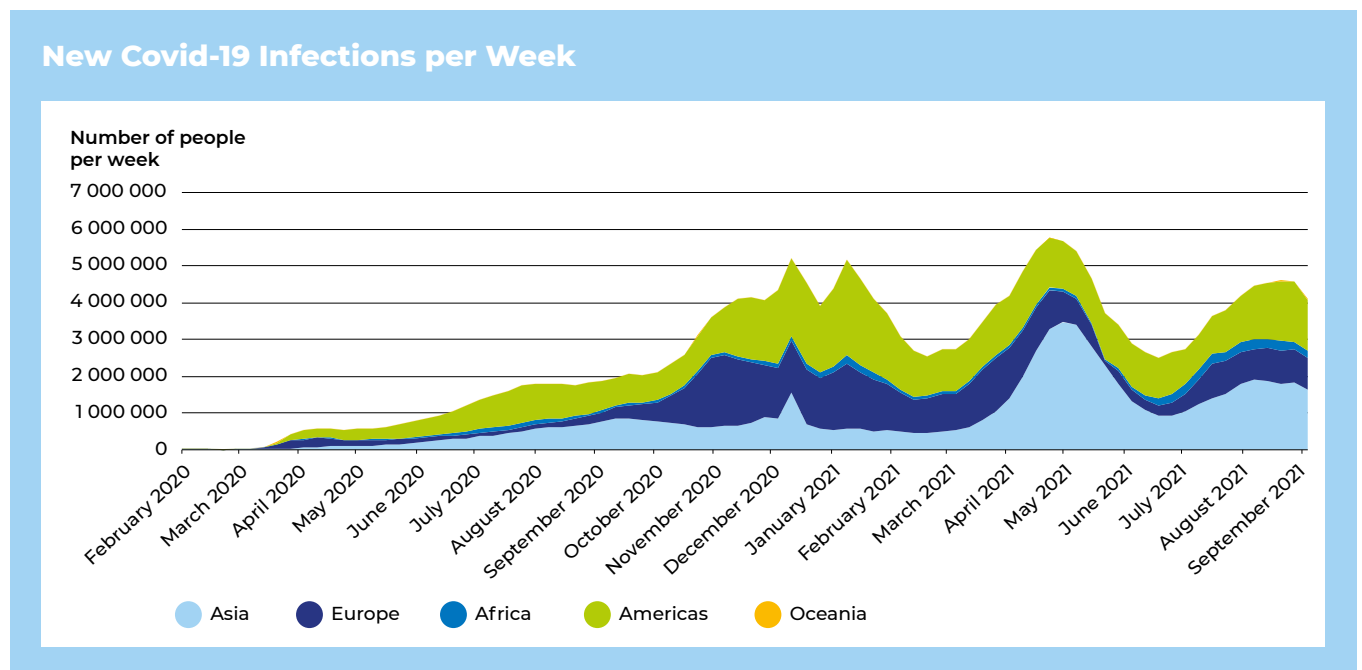


Fig. 29

Source: Johns Hopkins University Center for Systems Science and Engineering

## Plunge in Consumer and Business Confidence

Many, many countries were taking similar measures. Up to half of the world's population was confined at home. World trade slowed down sharply, and travel movements dried up. In Switzerland, as in other industrialized economies, household and business confidence plunged. In particular, the leading indicators of the Organisation for Economic Co-operation and Development (OECD) fell by around 10%.

The damage caused was considerable. While part of the economy was at a standstill, the use of short time working took on unprecedented dimensions: in April 2020, more than 130,000 people in the canton were receiving compensation for reduced working hours (RHT). The previous "record", in 2009, was about 5,000 people. Thus, up to 30% of the employed people in the canton of Vaud benefited from RHT. In some industries, such as the hotel and

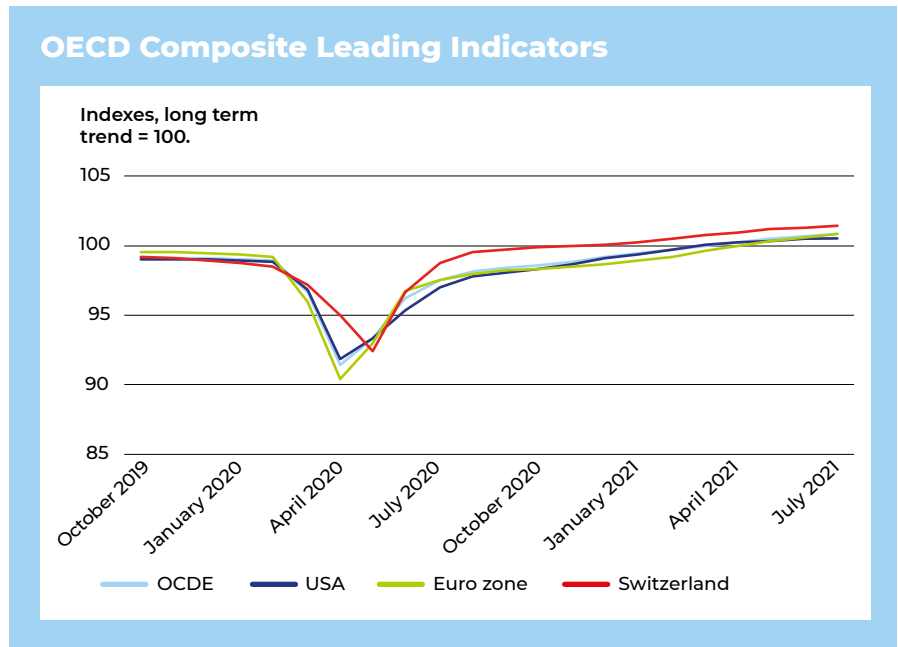


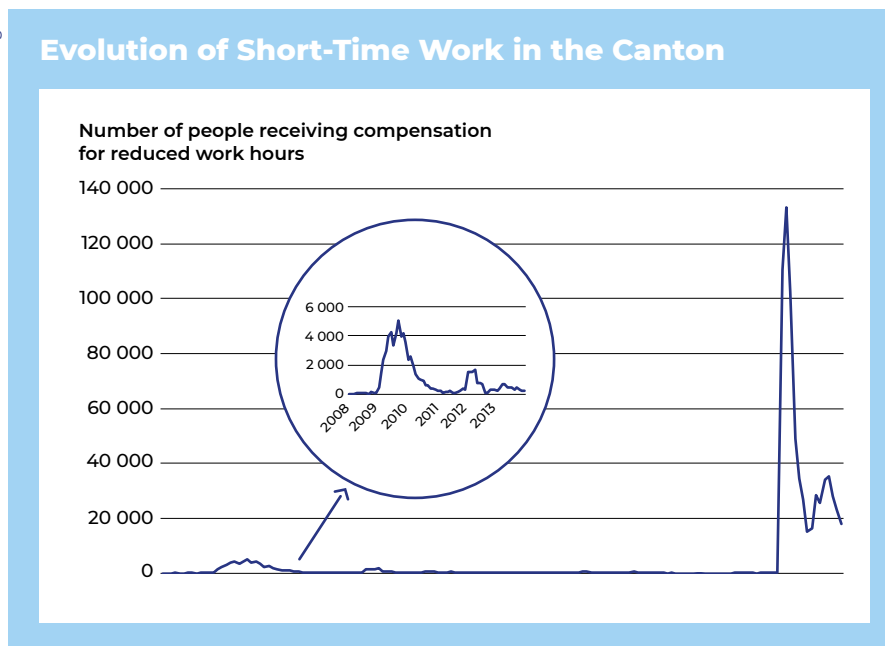
Fig. 30

Source: Organization for Economic Cooperation and Development

catering industry or recreational activities, this proportion ranged from two-thirds to nine-tenths. The canton of Vaud wasn't unique in this respect, as the same situation could be observed throughout Switzerland.

However, short-time work helped to preserve most jobs and the rise in the unemployment rate was contained: from 3.6% in December 2019 to 4.9% in May 2020 in the canton. In Switzerland, the increase was also measured: from 2.5% to 3.4%.

Fig. 31



Source: State Secretariat for Economic Affairs

However, all industries have been affected. Broadly speaking, during previous episodes of economic tension, activities geared towards foreign markets, mainly in manufacturing, suffered from the situation, while sectors active on the domestic market, particularly services and construction, benefited from robust domestic demand and stabilized the economy. However, the Covid-19 crisis slowed down global activity, which affected Vaud exporters (their foreign sales fell by 14.0%) and led to the introduction of protective measures that hampered the activity of certain domestically oriented sectors, or even brought them to a temporary standstill.



## Share of jobs affected by short time work in the canton

	January 2020	April 2020	July 2020	October 2020	January 2021	April 2021
<b>Primary sector</b>	0.0%	3.9%	0.9%	0.6%	0.9%	0.5%
<b>Food, textile, leather, wood, paper</b>	0.0%	43.1%	11.1%	3.7%	11.0%	8.1%
<b>Chemistry, pharmaceuticals, rubber, glass, metallurgy...</b>	0.4%	32.0%	9.8%	6.0%	5.9%	3.9%
<b>Machinery, equipment, watchmaking...</b>	1.1%	63.3%	31.6%	18.7%	10.3%	7.4%
<b>Production and distribution of electricity and water</b>	0.0%	18.1%	1.1%	0.3%	0.8%	0.5%
<b>Construction</b>	0.0%	53.9%	5.3%	2.1%	2.8%	2.0%
<b>Wholesale and retail trade, repairs...</b>	0.0%	34.9%	7.0%	2.6%	11.8%	5.4%
<b>Hotels and restaurants</b>	0.0%	85.9%	31.5%	17.4%	54.2%	44.3%
<b>Transportation, post and telecommunications, publishing</b>	0.0%	25.0%	8.2%	4.7%	6.1%	4.3%
<b>Financial and insurance services</b>	0.0%	9.7%	2.4%	0.7%	2.0%	1.4%
<b>Real estate and business services...</b>	0.0%	30.3%	8.3%	3.3%	6.3%	4.0%
<b>Public administration, health, education, sports...</b>	0.0%	15.7%	3.0%	1.3%	3.2%	2.3%
<b>Other services</b>	0.0%	43.8%	14.3%	6.2%	12.7%	8.1%
<b>Primary</b>	0.0%	3.9%	0.9%	0.6%	0.9%	0.5%
<b>Secondary</b>	0.3%	49.2%	13.0%	6.9%	6.2%	4.4%
<b>Tertiary</b>	0.0%	26.6%	6.9%	3.1%	8.2%	5.5%
<b>Total</b>	0.1%	29.8%	7.7%	3.6%	7.6%	5.2%

Fig. 32

Number of persons receiving compensation for reduced working hours in relation to employment in the relevant industry group.  
Sources: State Secretariat for Economic Affairs, CREA

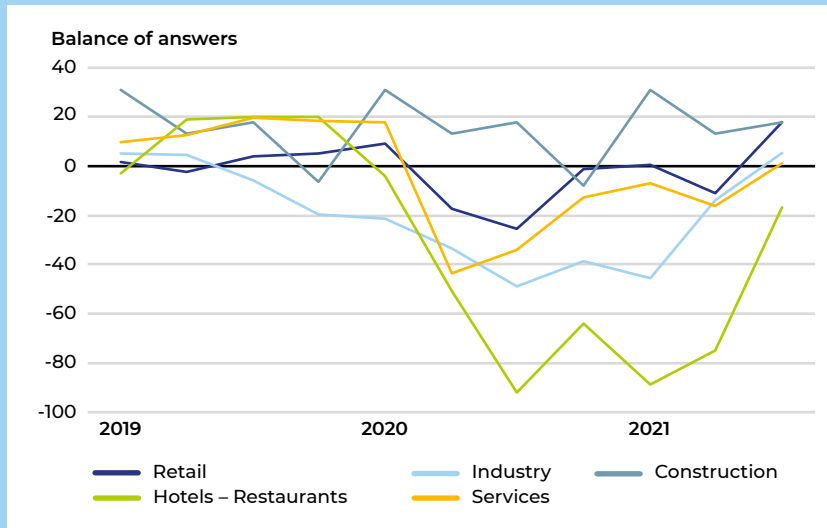
## A Summer of Improvement

After closing, the Federal Council finally decided to open. In Switzerland, protective measures were eased off, and businesses and services reopened gradually between April 27 and June 19. Although it was difficult to speak of a return to normal, as protective measures were still in force, the situation improved significantly, and the proportion of people covered by the RHT fell back below 10% in July. At the same time, other countries gradually eased their protective measures. Overall, the improvement in consumer and business confidence has been spectacular.

Further deterioration in the sanitary situation from autumn 2020 onwards resulted in the reintroduction of protective measures in Switzerland and many other countries. These measures were not as restrictive as those introduced in the spring, as shown by the evolution of compensation for reduced working hours. Some sectors, such as catering, events and entertainment, continued to be severely hampered, while others, such as retail, construction, manufacturing and services, benefited from the economic upturn in the canton, in Switzerland and around the world.

Fig. 33

### Evolution of Businesses in the Canton of Vaud



Source: Commission Conjoncture vaudoise

### Less Serious Than Initially Feared

In the end, the outcome was not as bad as initially feared. While the initial forecasts in the spring of 2020 predicted a fall in Swiss and Vaud GDP of 6.7% and 5.5% in 2020, the decline was ultimately limited to 2.7% and 1.8%. The same trend can be observed in other countries and on a global level. In June 2020, the International Monetary Fund (IMF) expected GDP to plunge by 10.2% in the eurozone in 2020, by 8.0% in the US and by 4.9% worldwide. Its estimates for July 2021 point to less pronounced declines: -6.5%, -4.6% and -3.2% respectively.

The recovery began in the summer of 2020, and the reintroduction of protective measures in the fall did not interrupt it. In addition, 2021 began with the prospect of fighting the pandemic with a vaccine. Several effective products were developed in record time and arrived on the market in large quantities, making it possible to launch large-scale vaccination programs, at least in industrialized countries. This made it possible

to relax protective measures. However, at the same time, new and more contagious strains of the SARS-Cov2 virus appeared, such as the Alpha ("English") and Delta ("Indian") variants. At the time of writing, at the end of summer 2021, this has complicated the control of the pandemic in Switzerland and has led to the extension of the use of the Covid certificate (which documents a vaccination, a cured infection, or a negative test). But the prospects for recovery did not seem to be compromised.

The forecast for the year 2021 as a whole remains positive. The unemployment rate fell to its pre-crisis level by mid-2021. Moreover, with growth rates forecast at 3.1% and 3.6% respectively, GDP in Vaud and Switzerland should reach - or even exceed - its 2019 level in 2021. The recovery is expected to continue in 2022, at rates of 3.2% and 3.3% respectively. Economic momentum is also strong in the US (+7.0% in 2021 and +4.9% in 2022). It is a little more hesitant in the euro zone (+4.6% and +4.3%), which is only expected to return to its 2019 GDP in 2022.

### Massive Support Measures

The economic recovery has also been supported by the massive support measures put in place by governments to compensate for the losses caused by the containment measures. Stimulus plans, broad or targeted support, credits or outright grants - the measures vary from one country to another, but all have one common denominator: the unprecedented scale of financial resources made available in view of the particular nature and scope of this crisis. For example, the various stimulus packages put in place in the United States since the beginning of the epidemic amount to more than 5,000 billion dollars, or about a quarter of the American GDP.

In Switzerland, the Federal Council, with the approval of Parliament, has introduced a support plan of CHF 56.9 billion for the 2020 to 2022 period. Most of the spending (2020) and credits (2021 and 2022) will be for social welfare (54%), healthcare (13%) and the economy (24%). As for the 2020 credits (55% of the total over three years), only half has been spent. These figures show the willingness of the authorities to allow the country to cope with the situation. But they also illustrate the resilience of the Swiss economy: while some business structures have had difficulty in obtaining financial aid, and others have been heavily affected by the protective measures that had been prolonged or reactivated, the economy has adapted and continued to operate.

### Financial Aid in the Canton

Vaud companies have thus benefited from their share of federal aid, in particular compensation for reduced working hours and allowances for loss of

## The Confederation's Support Plan

	2020-2022	
	2020 Actual Expenditures and 2021-2022 Authorized Appropriations	
	Millions of francs	Percentage of total
<b>Total Expenditures</b>	<b>40 689</b>	<b>100%</b>
<b>Social Security</b> Compensation for reduced working hours, unemployment insurance contribution, loss of earnings allowance...	22 154	54%
<b>Healthcare</b> Purchase of health equipment and therapeutic products, screening tests...	5 449	13%
<b>Economy</b> Losses on bonds, tourism and export promotion, measures for hardship cases...	9 887	24%
<b>Traffic</b> Railway infrastructure fund, aviation related companies, regional passenger transport, rail freight traffic...	1 362	3%
<b>Culture and Leisure</b> Sport, culture, media	1 117	3%
<b>Foreign Relations – International Cooperation</b> Loan to the International Committee of the Red Cross, Global Security Initiative...	643	2%
<b>Other (research, security, agriculture...)</b>	77	0%

Fig. 34

**Note:** Data as of August 18, 2021.  
**Source:** Federal Department of Finance

earnings. In addition, out of the 50,000 or so companies in the canton, nearly 15,000 have taken out a Covid-19 loan, for a total of CHF 1.7 billion (average loan: around CHF 115,000). Vaud is Switzerland's third largest economy and is very open to the outside world. It is the second-largest beneficiary of this scheme (10.2% of the total volume), behind Zurich (17.2%) and ahead of Berne (9.3%) and Geneva (8.0%). These loans, granted in collaboration with the banking industry, the Swiss National Bank and the guarantee cooperatives, were intended to make liquidity available very quickly to companies affected by loss of income linked to the protective measures. Applications had to be submitted by July 31, 2020.

This program was completed by a component dedicated to start-ups, which were not covered by aid defined according to turnover. A sum of CHF 100 million was made available by the Confederation for guaranteed credits. Berne assumed 65%

of the guarantee and the canton of residence 35%. Out of the 21 participating cantons, Vaud, one of Switzerland's leading start-up incubators (along with Zurich, which has its own program), was by far the one that took in the most loans: 131 for a total of CHF 36 million, or 36.5% of the total. Vaud also guaranteed 100% of the loans to start-ups that did not meet the Confederation's criteria, for a little over 2 million, bringing the total amount of financial support in the canton to 38.5 million. Federalism has sometimes slowed down decision-making, while some cantons - notably Vaud - have sought to respond to difficulties within their own territory. Solutions involving Berne and the cantons were eventually found. One example is the transitional credits for start-ups. Another is the so-called "hardship" aid, which is intended to cover the loss of turnover in sectors whose activity has been severely limited or halted for many months because of the protective measures, such as the hotel and catering industry, the cultural sector and

the events industry. This support consists of non-repayable contributions, but also of credits, sureties and guarantees. For companies with an annual turnover of less than CHF 5 million, the Confederation provides 70% of the funding and the cantons the rest.

At the beginning of August, some 2,900 companies in Vaud had benefited from this support, according to federal data. The canton of Vaud is among those that have made the most use of this aid, along with Zurich, Geneva, Berne, Fribourg, and Aargau. Considering cantonal exceptions, the volume of hardship aid in the canton of Vaud amounted to CHF 317 million at the beginning of September 2021.

### More resistant

The canton of Vaud has also set up specific aids, in particular a voucher system in collaboration with the Qoqa e-commerce platform, support for apprentices and training companies, and reactivated the industry support fund.

Coupled with the decision to temporarily suspend the obligation for companies to notify the judge in the event of overindebtedness, the financial aid provided has made it possible to avoid a wave of bankruptcies. The number of bankruptcy proceedings opened in Switzerland fell by 6.6% in 2020 compared to 2019, with a similar trend (-4.6%) in the canton of Vaud.

### Summary of Vaud's Aids

Montants perçus par les entreprises (en francs)

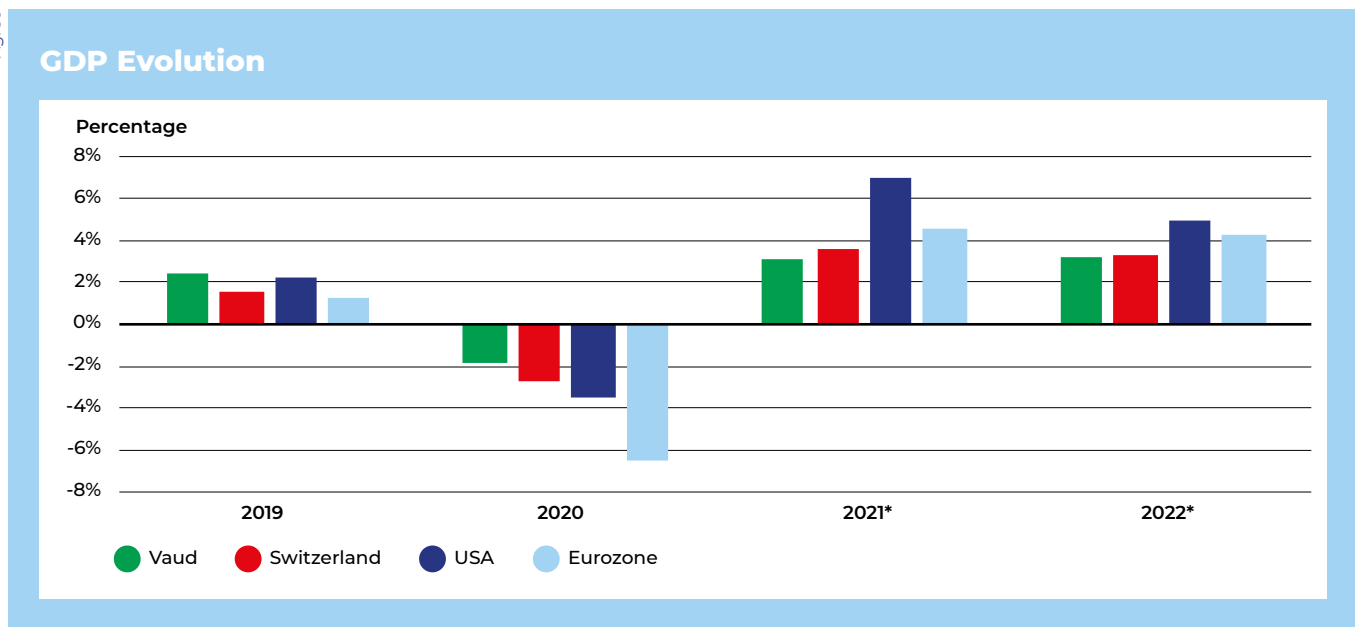
Fig. 35

welQome	102.0 millions
Tenant Aid (May-June 2020)	2.0 millions
Start-up Aid (in the form of loans)	38.5 millions
Apprentices Aid	16.0 millions
"Hardship" Cases Aid	316.9 millions
Industry Support Fund	5.7 millions
<b>Total</b>	<b>481.1 millions</b>

Note: Status as of September 13, 2021. Source: Canton of Vaud

Financial support was made available to companies, but also to individuals through the "Covid-19 loss of earnings allowances". Whether self-employed or employed, there have been many cases where people have been forced to stop working because their children could no longer be cared for by a third party and have been included in the support measures. To date, more than 3.5 billion euros have been paid out in the form of allowances.

Fig. 36



Note: Annual change, in real terms and percentages. \* = forecast. Sources: International Monetary Fund, Federal Statistical Office, State Secretariat for Economic Affairs, CREA

In the end, Switzerland and the canton proved to be more resilient than most industrialized economies in 2020, with smaller declines in GDP (-2.7% and -1.8% respectively) than those experienced by the US or the eurozone, for example (-3.5%

and -6.5%). Logically, after a smaller decline, the potential for recovery is also smaller. Thus, the weaker growth forecasts for Switzerland and the canton than for the US and the eurozone in no way indicate a weakening of the economic momentum.

## Under the Magnifying Glass

### The Rise of Remote Work

One of the lasting effects of the Covid-19 crisis is an acceleration of the digitalization of the economy. The tip of the iceberg, telecommuting, has entered the corporate world with a bang, creating new organizational modes.

In Switzerland, due to the sanitary situation, teleworking was recommended for long periods, or even temporarily made compulsory, for those companies whose activity allowed it. For many organizations, it has been a challenge to adopt this way of working at an accelerated speed in spring 2020. However, 20% to 25% of companies were already practicing teleworking, according to a BCV survey conducted at that

time. During the crisis, the proportion of companies using telework increased to a little over 40%.

In a survey conducted in the fall of 2020, the CVCI found that the benefits identified by Vaud companies are mainly the reduction of travel-related stress (66% of respondents), a better balance between private and professional life, as well as an increase in employee satisfaction (59%). The main challenges relate to communication within the company (51%), data protection and cyber security (42%), as well as monitoring compliance with working hours (30%). Setting up the necessary infrastructure was also a challenge for a third of companies.

The surveys also show that some of the companies that introduced home office during the crisis will continue to do so, to varying degrees. Thus, the Covid-19 crisis will have increased the share of companies implementing teleworking by about ten percentage points in just over a year.



## Covid-19 and the Lockdown

**April 23, 2020**

In mid-March, the Federal Council ordered the closure of schools, so-called “non-essential” businesses and restaurants. Cities change their face and shopping streets, such as the Rue de Bourg in Lausanne, become empty.

## Testimonial

# “The Worst Since World War II”

Pierre Dubois, owner of a watchmaking company in the Vallée de Joux, considers the current crisis to be the most serious he has ever had to face. He looks back at the uncertainties of the last few months and discusses the future prospects in this new world.



Of all the crises that Dubois Dépraz has experienced, the Covid-19 one is clearly the worst since the Second World War for its CEO, Pierre Dubois. This company, which manufactures and assembles watch mechanisms that it sells to its client brands, found itself at a standstill overnight in March 2020, like thousands of others.

“Within a week, many of our clients closed their doors for several weeks, and in turn, we were forced to do the same,” he explains. “There was a lot of uncertainty, especially from a human standpoint: when were we going to be able to reopen? We had to deal with order cancellations or postponements.” The company remained closed for nearly two months, but compensation and various forms of assistance were provided very quickly, to the great satisfaction of Pierre Dubois, who praises the work of the authorities. By August, the company, after experiencing the first wave, entered a phase of “controlled uncertainty”.

At the beginning of this year, the Vallée de Joux industrialist felt a few signs of a shift in the industry. Orders gradually returned, and capacity had to be readjusted to the workload. Production cycles take several months, and the company also depends on its own subcontractors.

“Watchmaking is a highly complex business. This sector is made up of accelerations and decelerations.”

On the eve of this summer, the recovery was confirmed, but it still lacked consistency, according to the company manager. The outlook remained unclear, especially since waves of infections were still appearing here and there. “But we got used to this situation,” notes the head of Dubois Dépraz. “Confidence has been reinstated with vaccinations. The year 2019 was the year of all records. To get back to such figures, we will have to wait until 2023 or 2024.”

In this context, Pierre Dubois is more aware than ever of the importance of having good framework conditions. He admits that he finds it difficult to imagine that certain industries would no longer be able to sell their products in the European Union because of the lack of permanent bilateral agreements. “As much as I am attached to my professional independence and that of Switzerland, I am also aware that these agreements are indispensable. We cannot live with the idea that certain products can no longer be sold in Europe. We are 8 million people in a market of 450 million. We don’t have all that leverage”.

Lastly, Pierre Dubois would like us to remember that the authorities did a good job in managing this crisis, with a small nuance during the second wave. “In the companies of the Vallée, about 70% of the employees are border workers. They were able to work and sometimes go about their business on our territory, but once they crossed the border, they were under curfew! We don’t realize how lucky we were to live almost without restrictions,” he concludes.

# Fifteen Years of Gradual Transformation

**Although the canton of Vaud was particularly affected by the 1990s crisis, it recovered thanks to the development of high value-added industries and active economic promotion. Revitalized, it was able to get through the 2005-2020 period and its shocks without major upheavals. However, the development has not been uniform across sectors, and some seemed to be unaffected by the economic situation.**

## Stability in Turbulent Times

At first glance, Vaud's economy seems to be surprisingly stable. Between 2005 and 2020, the shares of GDP of the secondary and tertiary sectors have remained stable to within one percentage point: 21.5% for the former and 77.6% for the latter. The primary sector eroded, but its share of GDP remained around one percent. In terms of employment, the evolution was slightly more perceptible, with an increase in the share of tertiary sector employment (from 75.7% to 78.4% of total employment, in full-time equivalent), a decline in secondary sector employment (from 20.6% to 19.1%), and a decrease in primary sector employment (from 3.8% to 2.4%).

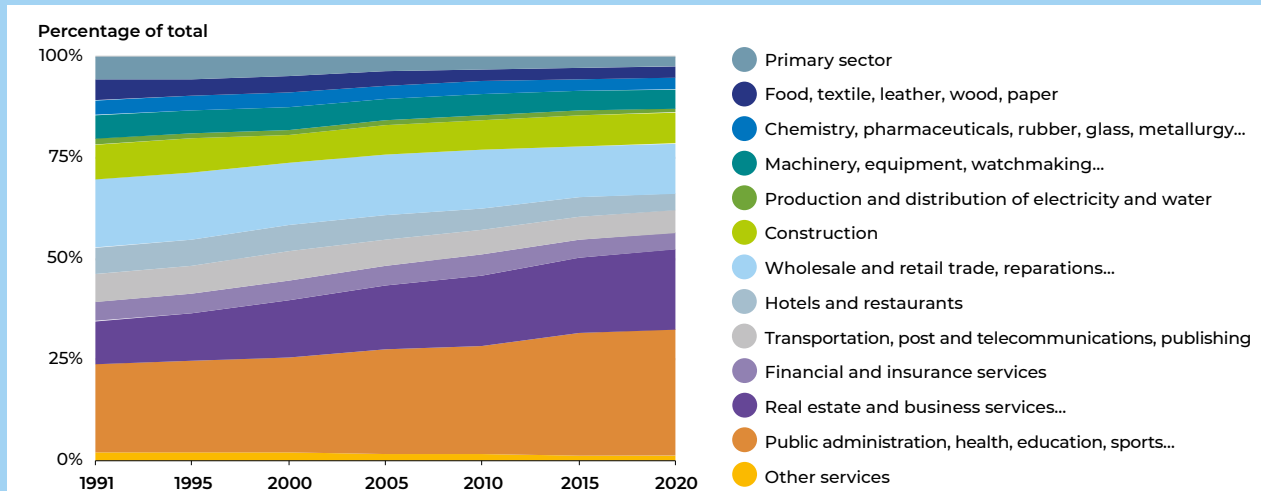
This consistency is in sharp contrast to the previous decade and a half. From 1991 to 2005, the share of primary

employment fell from 5.6 percent to 3.8 percent, while secondary employment fell from 24.8 percent to 20.6 percent. The tertiary sector increased from 69.6% to 75.7%. This profound change in the structure of the Vaud economy was triggered by an economic crisis in the canton and in Switzerland, which began with the deflation of a real estate bubble. The unemployment rate exceeded 8% in the winter of 1997. Public deficits accumulated and the canton's total debt (including municipalities and the federal government's share of the debt in proportion to the population) rose to 85% of GDP in the early 2000s.

The Vaud authorities have encouraged the development of high value-added sectors of the canton's economy. Universities have encouraged technology transfer, in particular through the creation of start-up companies.

Fig. 37

## Employment Trends by Industry Group





The “Bonny Decrees” and their mechanisms, such as direct federal tax relief, which were valid until 2007, were widely used by the canton, which was one of the most affected by the 1990s crisis. Economic promotion has enabled foreign companies or headquarters to set up shop in the canton. The development projects of companies based in the canton or elsewhere in Switzerland have also been encouraged.

As a result, public finances have been restored – the canton’s total debt has fallen back below 50% – jobs have been created and unemployment has fallen. All this despite the fact that the global economic situation has developed in fits and starts.

### Secondary Sector: Not Left Behind

Although the 2005-2020 period was not one of great change, it did see certain developments in the Vaud economy (see Figure 7 on p. 13), partly linked to the economic situation, but also to underlying trends. The result has been that GDP growth has trended faster than in Switzerland as a whole: 41.9% between 2005 and 2020 for the canton, compared with 29.7% for the country as a whole, or 2.4% per year and 1.8% per year respectively. In the canton, the secondary sector (+47.1%) has shown stronger growth than the tertiary sector (+41.3%), whereas in Switzerland as a whole, these two sectors have grown at similar rates (+28.0% and +30.0% respectively).

In terms of employment (+31.0% between 2005 and 2020, in full-time equivalent), the trend is slightly different. The increase is greater in the tertiary sector (+35.8%) than in the secondary sector (+22.1%). The expansion of high-value-added manufacturing sectors, mainly chemicals and pharmaceuticals, has certainly created jobs, but to a lesser extent than the increase in their value added. Thus, the expansion of Vaud’s economy is not simply a matter of the success of a few flagship activities – although this is important – but is based on the development of many industries, both in the secondary and tertiary sectors.

The three main drivers of this development are the chemical-pharmaceutical industry, business services and public and parapublic services, particularly education, but also health-care and social services.

### Cutting-Edge Industry

One of the successes of the century has been the development of the *Health Valley* in Western Switzerland. The canton of Vaud is one of the pillars of this region, with several life science research centers and subsidiaries or headquarters of numerous companies in the pharmaceutical and medical technology industry. Between 2005 and 2020, the added value of the chemical-pharmaceutical industry in Vaud has increased sixfold, and its employment by 1.9. The magnitude of the jump in added value is explained in particular by the very significant investments in research and development

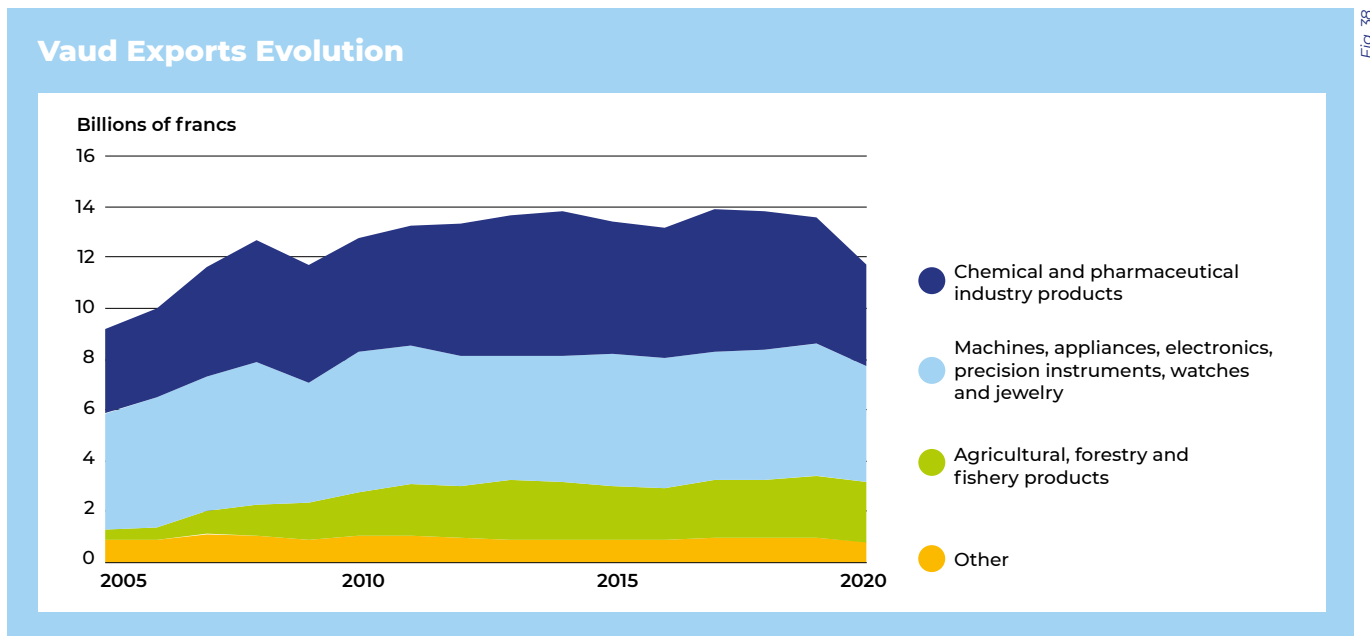


Fig. 38

Note: Due to a change in the way cantonal exports are calculated and presented by the Federal Customs Administration, recent and historical data have been restated to reconstruct a long-term series. Source: Federal Customs Administration

that characterize this industry. This growth has enabled the industry to increase its share of Vaud's GDP from 3.1% in 2005 to 5.9% in 2020, and from 0.9% to 1.3% in terms of employment.

The study "Vaud Innove – An Ecosystem with Many Faces", published in chapters between 2019 and 2020 by BCV, CVCI and Innovaud, explains why the life sciences cluster is a very important component of the canton's innovation ecosystem. In particular, life sciences start-ups are the ones that attract the most important fund-raising. And some of them, such as AC Immune and Sophia Genetics, have reached a level of development that allows them to be listed on the stock exchange.

The manufacturing industry is not limited to the chemical-pharmaceutical sector. The manufacture of transport equipment (value added: +25.7%, employment: +78.0%) has benefited from the "contract of the century". Awarded in 2010, the contract covers the manufacture of some 60 double-decker train sets, worth around CHF 2 billion, by the Bombardier Transportation site in Villeneuve. Despite delays and the takeover of Bombardier Transportation by the French group Alstom, it was finalized at the beginning of 2021.

Food production has also seen its impact on the cantonal economy growth (value added: +19.0%, employment: +23.9%).

In particular, the Nestlé Group's subsidiary Nespresso has been growing strongly for several years, approaching the six-billion-franc mark in sales. A large part of its production is carried out at its sites in Avenches and Orbe (the rest in Romont (FR) for an entirely Swiss production). Orbe is home to other Nestlé Group entities and a production site of the Liechtenstein group Hilcona. The food industry is also one of the pillars of the canton's innovation ecosystem, which is supported by the region's universities, such as the Swiss Federal Institute of Technology in Lausanne (EPFL) and the École hôtelière de Lausanne (EHL), as well as the Swiss government's Agroscope and the Agropôle in Molondin. On a Swiss scale, the field has been federated within the *Swiss Food & Nutrition Valley*.

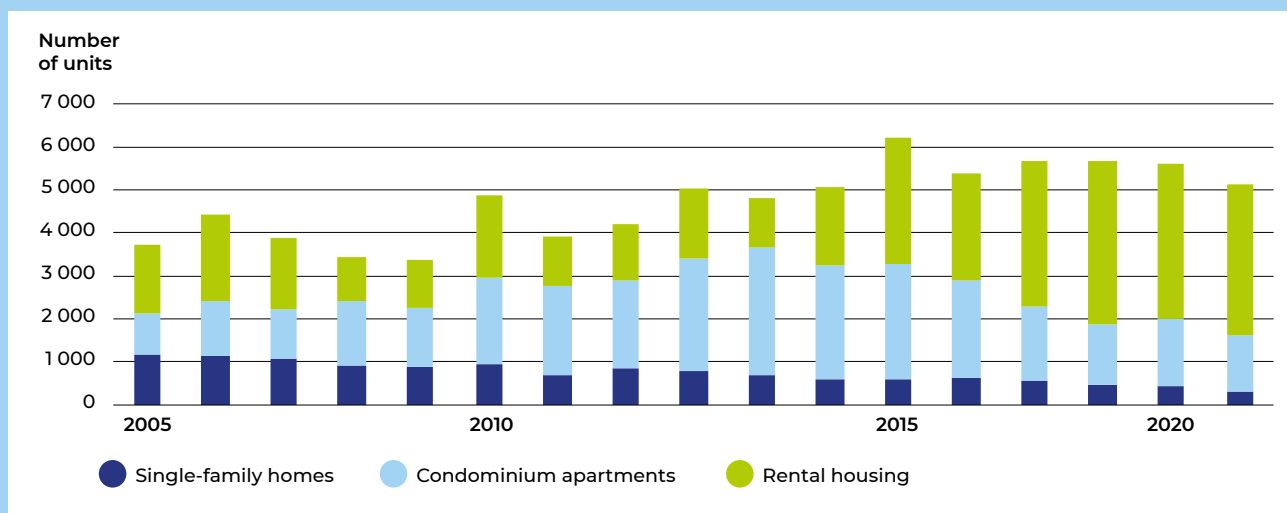
In terms of value added, however, the machinery and precision instruments industries suffered a decline of 15.8% between 2005 and 2020. These sectors, which are highly oriented towards foreign markets, have felt the effects of weak global demand, the strength of the Swiss franc and declining export dynamics. Despite this, employment has grown by 8.4%.

## The Dynamism of Construction

Construction (value added: +18.3%, employment: +35.0%) has notably benefited from the recovery of the real estate market. In line with the strong demographic dynamics in

Fig. 39

### New Housing Construction in the Canton



Sources: Central building permit office, Federal Statistical Office, Wüest Partner, BCV calculations

the canton and the fall in interest rates since the turn of the century, housing construction has been robust. However, for several years it was insufficient, and the canton experienced - and in some areas still experiences - a housing shortage. The vacancy rate fell to 0.4% in 2009, before gradually rising to 1.5%, which is considered a balanced market. Construction volumes have gradually increased, while population dynamics have weakened.

In addition, the share of rental housing has increased, as this market attracts institutional investors looking for alternatives to the increasingly unremunerative bond investments. In 2005, rental housing accounted for just over 40 percent of new housing, with condominiums and single-family homes accounting for the majority. By 2020, rental housing will account for two-thirds of new housing units on the market.

### Retail, Hotel and Restaurant Industry in Transition

In retail (including wholesale trade and vehicle trade), value added (+64.2%) grew significantly more than employment (+6.7%). Retail sales especially benefited from the growing population and the development of specialist retail chains. On the other hand, small traders suffered from increased competition. In addition, employment growth has been held back by the search for productivity gains, particularly in the food industry.

Another fundamental trend has been at play since the beginning of the century: the development of online shopping. While the food industry has remained relatively unaffected, competition has been very strong in certain areas such as clothing, home electronics and even furniture. In addition, the appreciation of the Swiss franc has encouraged purchases abroad, either across the border or during short stays in European cities. If the Covid-19 crisis and the barriers to travel have temporarily put a brake on shopping tourism, the episodes of “non-essential” businesses closures have accelerated the development of online commerce.

For the hotel and restaurant industry, the period from 2005 to 2020 was divided into three phases. From 2005 to 2010, the environment was favorable and these sectors saw their added value and their workforce grow. From 2010 to 2015, with the appreciation of the Swiss franc and the economic difficulties of our neighbors, who are also the main guests of our hotels, demand weakened. However, the minimum exchange rate of the Swiss franc against the euro eased the pressure, to some extent. The Vaud Alps suffered more than the urban destinations, which continued to benefit from business tourism despite margins being under pressure. Value added stagnated and employment began to decline.

With the abandonment of the euro floor in 2015, the situation became even more difficult. Value added and employment declined between 2015 and 2019. In 2020, the Covid-

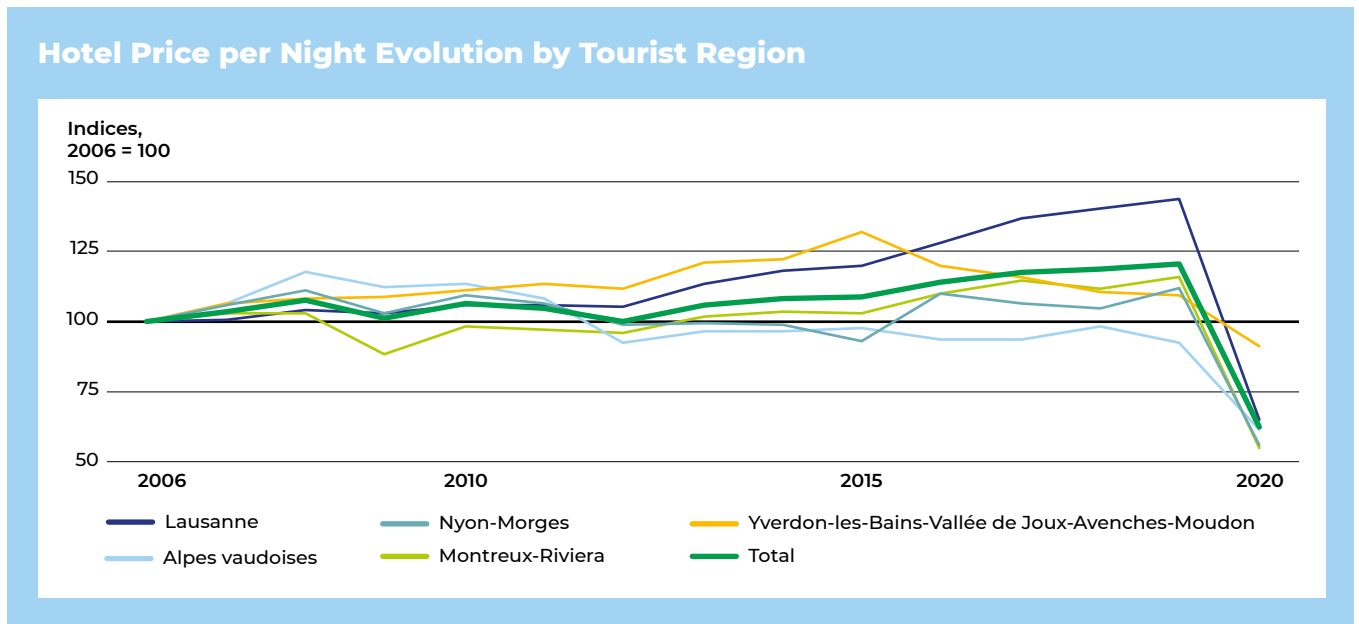


Fig. 40

Source: Office fédéral de la statistique, Statistique Vaud

19 crisis, the closure of restaurants for several months, the collapse of international tourism and the protection measures have plunged the hotel and restaurant industry into a very deep crisis. Ultimately, the balance sheet of these fifteen years is very negative, with a fall of 27.9% in the value added of these two branches and a decline in employment of 7.4%.

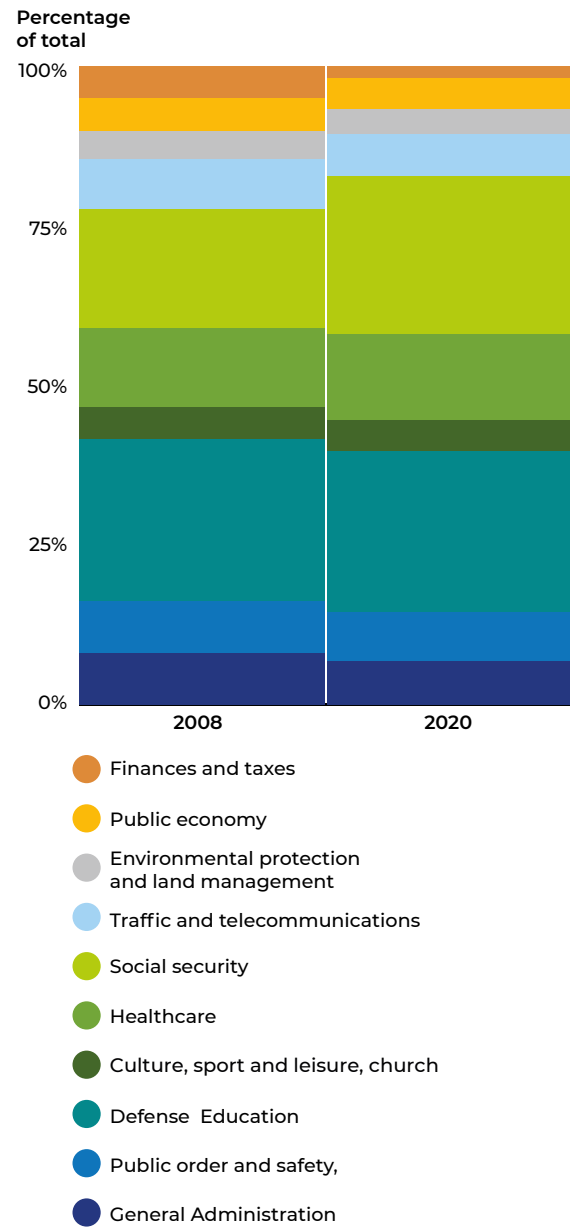
Logistics services (transport, mail and parcel delivery, warehousing; value added: -1.7%, employment: +18.0%) enjoyed a favorable environment until 2019, mainly due to the healthy domestic economy and the development of online trade. In contrast, due to the temporary shutdown of some companies and the hindered operation of some industries as a result of protective measures related to the Covid-19 pandemic, activity in logistics services declined significantly in 2020, leading to a decline in employment. This is despite the accelerating development of online trade.

The financial services industry (value added: +36.0%, employment: +16.4%), meanwhile, came through a period of great challenges without too much damage: the sub-prime crisis, several stock market crashes and episodes of high volatility on the financial markets, interest rates dropping into negative territory, increased regulation, the end of banking secrecy, etc. Because of its profile, with players more focused on the cantonal or national market, Vaud's financial center has been less affected by the upheavals of the last decade and a half than other financial centers in the country, such as Geneva, Lugano, or Zurich.

Halfway between personal and professional services, publishing, telecommunications, and IT (value added: +48.5%, employment: +49.5%) are among the industries for which the environment has been positive. On the downside, the publishing part of this group suffered a continuous decline, not least because of the fall in media advertising revenues. On the other hand, with the rapid progress of digitalization, the IT and telecommunication industries have seen their activity and their workforce grow.

Business services and real estate activities (value added: +43.9%, employment: +61.8%) – a very broad field that includes highly specialized activities as well as more traditional professions (see box on p. 15) – have developed more or less steadily. However, the dynamic was less strong after the subprime crisis than in the years preceding it, as companies continued to face some uncertainty about the global economic situation and, in particular, the difficulties in the eurozone.

## Evolution of the Nature of Expenditures of the Canton and Municipalities



Source: Federal Finance Administration

## Evolution of Public and Parapublic Services

In public and parapublic services (value added: 25.4%, employment: 31.3%; see also box on p. 14), three trends are visible: the growth of the education system, the development of the healthcare system and the increase in social expenditure. Developments in the other areas of government activity - administration, the economy, environmental protection and land use planning, security and justice, transport and telecommunications - primarily reflect population growth. Part of these changes can be seen in the evolution of the expenditure structure of the Vaud public authorities (canton and communes). Since public and parapublic services straddle the public and private sectors, some of this development also involves private-sector players, particularly in the healthcare area.

## Education in Constant Progress

The growth of the education system (value added: +13.1%, employment: +52.7%) reflects the increase in the population, but also the growth of the Vaud universities, universities of applied sciences, colleges and polytechnics. In particular, the number of students trained by these institutions has increased by more than 70% in fifteen years. As the study "Vaud Innove - An Ecosystem with Many Faces" points out, the canton's academic fabric is fully interconnected with global research. Its density (academic staff per capita), productivity (publications per researcher) and the quality of its research have nothing to envy the rest of the world. The number of foreign students has risen from 16% to 20% at the University of Lausanne, and from 38% to 58% at the Swiss Federal Institute of Technology Lausanne.

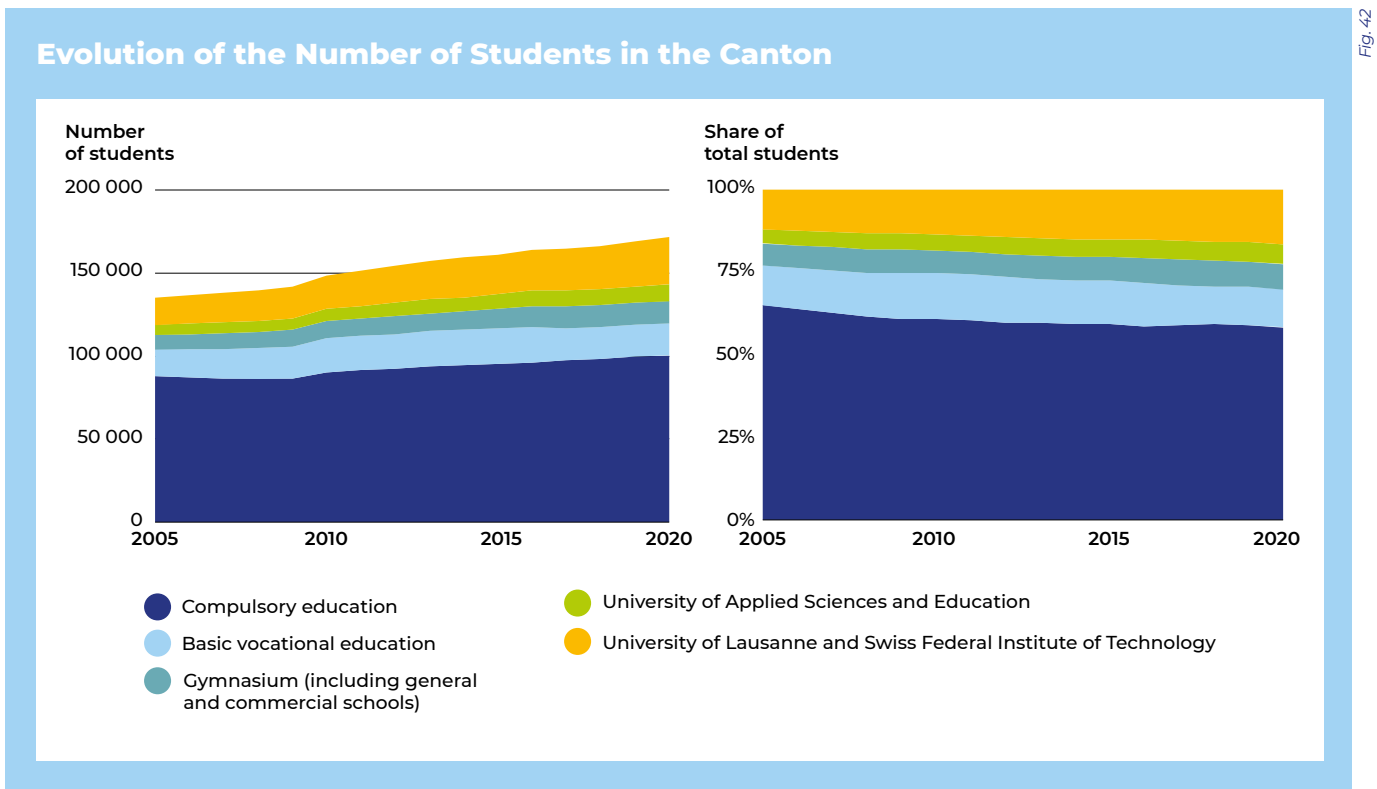


Fig. 42

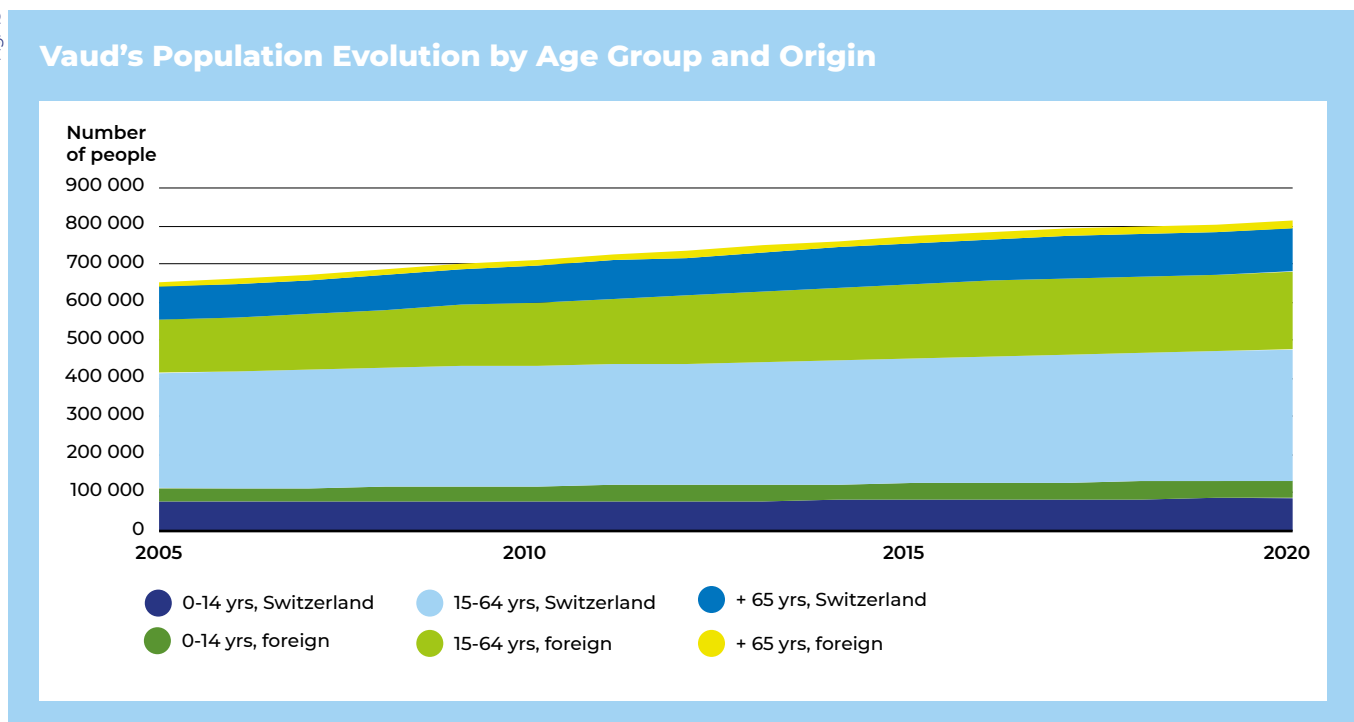
Note: Some missing data have been projected. Sources: Federal Statistical Office, Vaud Statistics

## Growing Role of Healthcare and Social Services

While the healthcare and social services sectors (value added: +63.2%, employment: +73.0%) are influenced by population growth, they also reflect the aging of the population. Although the latter has been tempered by the immigration of people of working age, the number of people aged 65 and over rose by 35.2% between 2005 and 2020, more than the number of people under 65 (+22.7%).

In this area there are other developments, such as the economic difficulties linked to the increase in the number of single-parent households and long-term unemployment. However, the main reason for this is the increased need for age- and illness-related services. Thus, the healthcare industry, whether private or public, is the main factor in this evolution.

Fig. 43



Source: Federal Statistical Office



## Health Valley

### ***One Day in the 21st Century***

The headquarters of the Ferring pharmaceutical group in Saint-Prex houses offices, production and distribution facilities. The development of the chemical-pharmaceutical industry since the beginning of the century is one of the success stories of the Vaud economy.

# A Light for the Future

## Work and Choices

“Stubbornness is the path to success”, as Charles Spencer Chaplin, also known as Charlie Chaplin, a resident of the upper reaches of Vevey, is said to have said. The strength and success of the Vaud economy over the past fifteen years are not the result of chance, but of the work of those who drive the canton forward and of a series of wise choices that have been effectively implemented.

This is how the canton was able to get through five episodes of crisis, some of which left deep traces in several countries, without too much damage. The economy has sometimes weakened, certain sectors have suffered, the Covid-19 crisis has left its mark and has affected several industries. But, overall, the main economic indicators – gross domestic product (GDP), employment and unemployment, and public finances – are in the green.

If the study “Vaud - The Discreet Tiger” confirmed the revival of the canton after the major difficulties encountered in the 1990s, this new publication shows that “the Vaud miracle” may not be a miracle in the theological sense, but it is not a myth. Moreover, if the desire to turn our backs on the crises and forget them as quickly as possible seems natural, analyzing them sheds an instructive light on the future.

Thus, the good health of the Vaud economy is not a given. While the full effects of the Covid-19 crisis have not yet been identified and the crisis is not yet over, new challenges are looming, while others, which have taken a back seat to the pandemic, are still waiting to be addressed. All of these challenges must be met in order to preserve the competitiveness of our canton.

## Not Plannable

First, in the face of globalization and geostrategic, political, or economic challenges, our economy does not have complete control over its destiny. Likewise, crises have, among other defects, that of often being difficult to predict. Trade wars, protectionist tendencies, sanitary crises, voluntary recovery plans of neighboring countries are all variables

with which we must deal with. The strength of our economy also has a downside, as we have seen with the appeal of the Swiss franc as a safe haven.

And even without external contingencies, the success of an economy – or of the companies in it – cannot be planned. It is the result of the interaction of a large set of factors: the right entrepreneurial projects at the right time and the right framework conditions. The latter are geographical, socio-cultural, economic, legal and political in nature. When these conditions are favorable, businesses emerge which, starting from an invention or a product, can become world references, such as Nestlé or Logitech in Switzerland.

Sometimes a network of companies in the same industry is created, having their fields of application or technologies in common. The Vallée de Joux in the field of watchmaking, the Lausanne region for drones, the French-speaking part of Switzerland for microtechnology, or the Health Valley are examples of this.

While life sciences are a field that is directly in line with one of the priorities of the authorities and universities, other success stories are proving even more surprising. The latest listing of a Vaud-based start-up, Astrocast, in August, concerns a project for a network of nanosatellites for the Internet of Things. Another example: the start-up Ecorobotix is developing advanced agricultural machines, such as an autonomous weeding robot. One of the strengths of the Vaud economy is its great diversification. It is hardly possible to predict who and what fields will become the success stories of tomorrow. On the other hand, it is essential to continue to improve the framework conditions, taking into account the specific characteristics of the economic fabric and the importance of certain sectors, in order to maintain Vaud's competitiveness.

## International Relations

Thus, access to the European market remains one of the priorities of the Swiss and Vaud economies. Although our exporters are increasingly diversifying their markets, the European Union (EU) remains our main trading partner by far. Easy access to the European market is therefore vital to the country's prosperity.



## The Rise of the Start-up companies

**June 16, 2021**

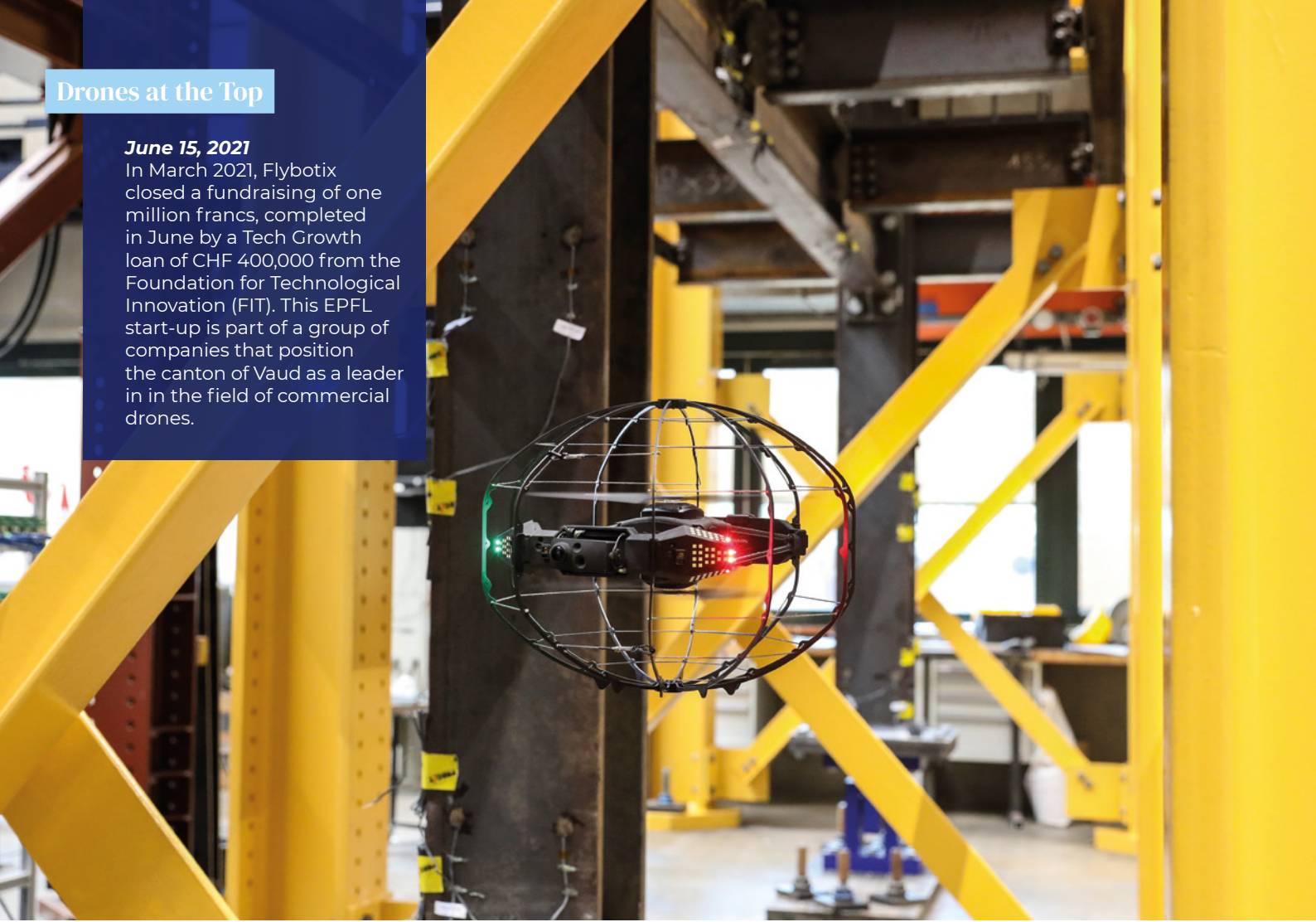
Ecorobotix raises \$14.7 million to accelerate its production and European expansion. This start-up, active in agricultural technologies, illustrates the diversity of Vaud's start-ups and the interest they arouse among investors.



## Drones at the Top

**June 15, 2021**

In March 2021, Flybotix closed a fundraising of one million francs, completed in June by a Tech Growth loan of CHF 400,000 from the Foundation for Technological Innovation (FIT). This EPFL start-up is part of a group of companies that position the canton of Vaud as a leader in the field of commercial drones.



After the abandonment of the negotiations on the framework agreement, continuing the discussions with the EU is a priority. This is not just a matter for the canton, but for the whole country. Moreover, it has ramifications in many areas other than access to the single market, for example in the area of research and participation in European programs.

Another issue that does not only concern Vaud is corporate taxation. After the termination of the “Bonny Decrees” in 2007, which facilitated tax holidays for new businesses, the momentum for foreign companies to set up in Vaud slowed down: an average of around 65 new foreign companies set up between 2000 and 2007, compared with an average of around 35 in the subsequent years. International discussions on special tax statuses, which were considered discriminatory, led to harmonization via the third corporate tax reform (RIE III) in Vaud and the tax reform and financing of the AVS (RFFA) at national level.

In the canton, a unified income tax rate of 13.8% has been introduced. Although this new framework is no longer as flexible, it preserves good tax conditions for international companies, which are important contributors to innova-

tion, employment, and tax revenues. However, recent discussions about a global minimum tax rate suggest that the situation will change in the near future. And that Switzerland and the canton will have to defend their interests. In addition, in national comparison, the level of personal taxation also remains a subject of attention.

### **Increase in Indebtedness**

Economic challenges are not limited to Swiss-European relations and international taxation. The global economy also presents its own challenges. The Covid-19 pandemic continues to disrupt the daily lives of people in many countries - and with it, the economy. It also continues to affect global supply chains, driving up raw material prices and transportation costs. On top of that, there are delivery delays. And, as of mid-2021, this situation is likely to continue for several more months.

In addition, many companies – like governments – have seen their debt inflate. Central banks have to balance the need to normalize their monetary policies (some of which

have been very expansive for a long time, in order to support the economy), with the need to avoid a rise in interest rates that would weaken the recovery. This situation could weigh on the global economy and influence the geopolitical context for many years. Trade tensions may therefore not subside any time soon. In addition, the environment of very low or even negative interest rates could last for many months or even years. For the Swiss economy, this raises the question of how the franc will perform.

## Digitalization and Environment

Major trends are still at work. While the Covid-19 pandemic accelerated the digitalization of the economy, it did not initiate it. The effects are multifaceted and concern both the work tools and processes and the interaction with suppliers and customers. In some cases, the latter can be integrated directly into the processes and perform operations themselves. In some cases, new players are disrupting an industry with a new technology-centric approach. These developments will continue, with the question of how companies can benefit from the necessary resources. In this area, these resources are largely human: being able to recruit a qualified workforce is a problem that the Vaud economy has already begun to face.

In general, the difficulty of finding highly qualified personnel, which is already a reality in certain industries, will increase in the coming years, particularly with the retirement of baby boomers. Successfully mobilizing the available workforce will therefore also represent a challenge.

The magnitude of another (double) challenge is becoming increasingly apparent: climate change and biodiversity loss. These are complex issues, both globally and locally, and the search for effective solutions is proving difficult. Moreover, in Switzerland and in the canton, finding consensus to change legislation and standards is not an easy task.

However, some solutions are already in place, notably in the area of construction or CO2 taxation. In addition, the authorities are adopting specific plans and targets. Owners are renovating. Photovoltaic energy production is growing. Research institutes are devoting more and more of their efforts to sustainable development. Start-ups are being created in this field. And the business world is changing. Overall, the canton of Vaud is well positioned as a center of excellence. Its network of universities and companies is already playing its part in the cleantech field.

## Favourable Framework Conditions as a Catalyst

The canton's recipe for emerging from the 1990s crisis wasn't that complicated. Its ingredients: a diversified economy, with a strong domestically oriented business base, well-positioned export industries and a rich innovation ecosystem. All this has given rise to start-ups and scale-ups in several fields. On top of that, we have favorable framework conditions that act as a catalyst.

The challenge of this recipe lies in the great constancy required for its preparation. As the evolution of the Vaud economy over the past 15 years shows, the result is convincing. The Vaud economy will certainly encounter headwinds and perhaps new crises in the future. Moreover, the current situation is still marked by numerous uncertainties and risk factors, which will require us to be reactive. However, with a few adjustments to keep it up to date, the recipe that the canton has tried and tested should enable it to maintain its dynamism and continue its development.



# Legal Notice

The study «From the Subprime Crisis to Covid, the Vaud Miracle» is a joint project of BCV, the Vaud Chamber of Commerce and Industry (CVCI) and the CREA Institute of Applied Economics of the HEC Faculty of the University of Lausanne, as part of the publications of the BCV's Observatoire de l'économie vaudoise (printed: September 2021).

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