SWITZERLAND

Excellence at the heart of Europe

Long famed for its precision engineering, pharmaceuticals, bedrock financial reliability, and unsurpassed standard of living, Switzerland is currently enjoying the best of both worlds: close trade ties to major European markets, but without the drawbacks of the common currency.

witzerland is used to being the calm center of a tumultuous continent. The mountainous country of eight million people has remained neutral amid war-torn neighbors for over a century and a half. And it's rich. Gross domestic product per capita was US\$81,100 in 2010, according to the International Monetary Fund (IMF)—two-thirds higher than that of the United States.

But Switzerland wasn't always so wealthy. "Switzerland reinvented itself; it used to be a market where people brought production in because of the low costs. But Switzerland shifted from being a farming country to a production country," said Elmar Wiederin, chairman of the Boston Consulting Group in Switzerland. That success has required innovation and attention to quality.

Long famous for its chocolate, watches, skiing, and secretive bankers, Switzerland today generates a greater proportion of its wealth from making things than do either the United States or the United Kingdom. Of the ten largest Swiss companies by 2011 revenue, according to Fortune magazine, four are manufacturers, three are financial corporations, and three are in the trade, retail, or mining business. These top ten include household names like Nestlé, Novartis, and Roche.

But the roots of Swiss prosperity, according to many economists, lie in mechanical and electrical manufacturers known collectively as the MEM, which employs 11 percent of the workforce while generating 35 percent of exports. Best known are giants such as ABB in energy equipment and Schindler in elevators, but most of the thirteen thousand MEM companies are small and mid-sized. And many of them are world class.

"The MEM industry is the backbone of our economy," said Hans Hess, president of the Swissmem trade association. "The most important assets for MEM companies in Switzerland are innovation, research, and education."

Now, however, this vital sector is facing a challenge with the strength of the Swiss franc, which has soared as investors flee other troubled currencies. At the start of 2010, it cost 0.67 euros to buy

one Swiss franc; it now costs 0.83 euros. The currencies almost reached parity around mid-2011 before the Swiss National Bank stepped in, selling Francs to halt the inward flood. Switzerland is one

of the dwindling number of European countries to retain its Triple-A sovereign credit rating. But Triple-A safety

> and status comes at a price: the high franc makes exporting more difficult. Economic growth could be down to 0.8 percent this year, the IMF said, picking up a bit in 2013.

"The strength of the Swiss franc has led and will lead to the deindustrialization of Switzerland," said Thomas Ladner, who chairs Zurich's exclusive Zum Rennweg business club. "Several companies in the MEM sector have decided to move elsewhere— a dangerous trend. Switzerland can survive in the long run if it captures the value added in top industries such as pharmaceuticals and biotech, where costs are less important compared to the innovation factor."

Many smaller companies see innovation, either in products or processes, as the solution. "Financially, the biggest challenge at the moment is the strength of the franc," said Carl Elsener Jr., CEO of Victorinox, maker of the famous Swiss Army pen-

knife. Innovation means over one hundred models, including one with a USB memory drive, plus a complementary range of high-end products and great attention to environmentally friendly production and packaging, with waste steel recycling and reduced water consumption.

Tradition & innovation

Countries have brands, just like companies, and they can build reputations worth a fortune. But even the best brands must modernize. For Switzerland, that means blending traditional skills with cutting-edge innovation.

For Swiss products, the popular image is one of solid craftsmanship and exceptional reliability—an image reinforced by the country itself with its spotless old cities, famous punctuality, and peaceful, manicured countryside.

The Swiss watch is perhaps the epitome of this image: a hand-crafted mechanism perfected through generations of skills that are handed down from father to son. But in the twenty-first century, Swiss watches must compete with five-dollar digitals.

"Today, Swiss watches have to represent both tradition and innovation at the same time, a pull of two opposite but not incompatible extremes," said Jean-Daniel Pasche, president of the Swiss Watch Industry Federation.

His organization is active in enhancing the degree of local content required to qualify for the coveted "Swiss Made" certification. It also works internationally, both to promote sales and to stamp out fakes.

In fact, innovation permeates the Swiss economy. According to the Global Innovation Index 2012 (GII), published jointly by the World Intellectual Property Organization (WIPO), a UN agency, and Insead, a leading French business school, Switzerland once again placed at the top of 141 countries.

"The quality of [Switzerland's] scientific and research institutions, coupled with numerous scientific and technical publications, good linkages between academia













and firms, and a skilled labor force stand out," the GII report said.

The GII looks at innovation as a function of innovation input and output, with a total of eighty-four indicators. Inputs comprise major pillars like institutions, human capital and research, infrastructure, market sophistication, and business sophistication, while outputs are knowledge and technology, which include patents, software spending, and ISSO-9001 certification, among others. Switzerland made the global top ten in almost all key questions, dropping slightly below the elite band for ease of starting a business.

Non-Swiss firms with major research and development (R&D) centers in Switzerland include Google, Microsoft, and IBM. Local companies, many of them global players and led by the pharmaceutical giants, devote substantial portions of their budgets to research.

Siemens is a German company but its US\$155 million building technology facility is in Switzerland. The focus is twofold: new construction and retrofits, with security, automation, and energy efficiency the keywords. "The degree of automation, the level of energy consumed, and the need for security are all much higher in developed countries," said Johannes Milde, CEO of Siemens Building Technology. He works closely with ETH Zurich, a top science and technology university, receiving students and teaching architects and planners about the new technologies available.

Oerlikon sees R&D as absolutely fundamental to maintaining its competitive position worldwide. Research receives around 5 percent of billings, meaning US\$231 million in 2011, with more than twelve hundred highly qualified developers and scientists.

"Innovation is part of Oerlikon's DNA," said CEO Michael Buscher, who holds a PhD in electrical

engineering from the

Technical University of

Darmstadt, Germany.

The company operates in over 150 locations in 38 countries in high-tech sectors including textile machinery, vacuum systems, and thin-film coating—Formula One racecar engines receive an extremely tough coating made by Oerlikon to enhance their performance. Automobile drive systems are another world-leading area, meeting the demands of such high-performance clients as Lamborghini and Aston Martin.

Now the aim is to optimize R&D processes to increase profitability and further differentiate from the competition. Buscher says his company benefits from access to well-educated and highly skilled talent in its Swiss location, and cooperates with local universities on a project-by-project basis. ■

It all starts in front of the blackboard -and on the factory floor

Swiss education is among the best in the world, and is one of the driving forces behind the country's continued success as a center of manufacturing.

With just 0.1 percent of the global population, Switzerland boasts no fewer than four of the world's 100 top universities, according to Times Higher Education. The Swiss Federal Institute of Technology, better known as ETH Zurich, places 15th overall-the highestranked European institution outside the United Kingdom. ETH Zurich has bragging rights: alumni include Albert Einstein (class of 1901), and 21 faculty and former students have received a Nobel Prize.

Despite these glittering qualifications, with a first-year attrition rate of 30 percent and doctoral candidates representing almost 22 percent of the

17,000-plus student body, ETH

Zurich is anything but an ivory tower. One key goal is transferring knowledge to the private sector. An average of 16 spinoff companies a year have been created out of the institute, while annual patent applications run at around 80.

"Quality of research is our key factor," said ETH Zurich president Ralph Eichler. "Switzerland is very innovative." But the strong focus on industryacademia integration doesn't mean that science takes a back seat. Eichler gives pride of place to quality and the focus on basic science; application is important, but it's a consequence, not the driver.

One great strength of the Swiss educational system is close cooperation between schools and companies. Students planning to follow a technical path start a "dual system" of vocational training in their teens, mixing an apprenticeship with classes at a vocational school or an industry training center. There is similar integration for undergraduates in technical subjects, who work as interns in selected companies. Companies establish an early relationship with potential new staff, while students gain invaluable real-world experience. No less than 97 percent of ETH Zurich students are employed within a year of graduating.

This integration between schools and the private sector has helped Switzerland hold onto a profitable and competitive industrial sector as many other advanced nations see their manufacturing jobs slip away. Some 27.5 percent of Swiss GDP comes from industry, close to Germany's 28.6 percent, while the United States now derives just 19.2 percent of its GDP from making things. More than 40 percent of Swiss GDP comes from exports—the U.S. is around 10 percent. Top exports are machinery, chemicals, metals, and watches. Germany, the United States, Italy, France, and the United Kingdom-all demanding markets-buy over half the total.



CARL **ELSENER JR. CEO** Victorinox

Few products define a country as well as the Swiss Army penknife. Not only is it instantly recognizable, steeped in tradition, and the subject of countless stories, but it is virtually synonymous with quality and precision.

The knife dates back to 1891 and an order from the Swiss army. Today, Carl Elsener Jr., greatgrandson of the founder, runs Victorinox with one eye on the domestic past and the other firmly on the global future.

"North America is still by far our most promising market," Elsener said. "The Swiss Army brand is so popular and so strong there. Moreover, people in the States are starting to get interested again in sustainable and quality products; we want to focus on the quality and functionality, and also on the stories behind our products."

Global sales took a 30 percent hit after airlines banned most penknives for security reasons. and then suffered again with the 2009 crisis, but now Elsener is looking to potential in Asia and Latin America.





 \rightarrow) Q&A

Michael Buscher CEO Oerlikon

"I measure Oerlikon's success with financial indicators but also by smiles."

Oerlikon is a world-class company operating in many high-tech areas, but it was badly hit by the global crisis in 2009 and has undergone significant restructuring that started even before you became CEO in May 2010. How is this process going now?

Well, the first part was financial restructuring; this was lead by the interim CEO Hans Ziegler. Then the second stage—after I came on board—involved operational reform with further site closings, consolidation, layoffs, increased efficiency, and an overall drive to make the company leaner. Now we're into the third stage, which is to shift the company towards greater sustainability and a mental preparedness to step up to the "champions' league."

Why have you stressed the importance of conducting all this in-house?

It's essential to make sure that such a process is not simply cost-cutting. What's important here is that this new orientation of our company was carried out without outsourcing to consultants. For example, we created new core values by ourselves and integrated our employees into this process.

This culminated in March 2012 with the sale of your solar energy division, which had developed world-class technology in thin-film silicon modules. Why? That sale allowed Oerlikon to focus on its higher volume businesses. The segment was sold to Tokyo Electron Limited. a company that's been a strong partner in this sector and will carry the business forward very well. It was a decision with caring about its future.

What is your definition of success?

I measure Oerlikon's success with clear financial indicators but also by smiles—those of our shareholders, customers, and employees.

And how would you describe your country, in one sentence? It is a great place. Many people identify Switzerland with the banking sector, mountains, and chocolate, but that underestimates the innovation capabilities and the high-tech industry.

Bricks and mortar booming; not a bubble in sight?

Famed as one of the most stable countries in Europe, Switzerland has been going through a construction and property boom fueled by a rising population and an influx of wealthy investors. With much of the euro zone in crisis, Swiss real estate is seen as a safe option.

Switzerland is far from being the world's biggest real estate market. But it is one of the hottest. A ranking published this year by CNBC, a businessnews cable TV channel, in conjunction with Knight Frank, an international real estate consultancy, placed Switzerland in the world's top ten, with housing prices rising by a real 27.5 percent through the last five years, against a global average of just 0.5 percent. St. Moritz, Gstaad, and Geneva placed among the world's ten most

expensive cities, based on cost per square meter.

Soaring demand and prices are not exclusive to residential property. A report published jointly by the Credit Suisse Bank and the Swiss Contractors' Association in the second quarter of this year spoke of planned developments in the office and administrative sector growing at a "tumultuous" rate. The value of approvals in 2011 was around US\$3.4 billion, up 53 percent over 2010, the report said, adding that

there was also strong demand for infrastructure and transportation construction.

So what's driving Swiss real estate, when economic growth hasn't averaged much better than 2 percent a year through the last decade? Sector analysts point to a combination of factors. Many foreign investors today see Switzerland as a safe haven, in particular after real estate prices collapsed in several European countries. With low-risk financial instruments paying miserly interest, property looks even more attractive. And of course the flip side of low interest rates is cheap loans, which also help drive up prices.

Furthermore, the population is growing, up by an average of 0.9 percent a year in the decade leading to 2012 compared with 0.6 percent a year in the previous two decades.

Switzerland has always had a large nonresident population working in international organizations and the private sector. Resident and temporary foreign workers make up about one in five of the population. But recently, the inflow of foreign workers has increased-net immigration was 330,000 in the four years through 2010, which further drives housing demand. And unlike the migrant populations in many other European countries, Switzerland's tends to consist of relatively high earners

The word "bubble" is on everyone's lips. UBS, a major Swiss financial services company, even publishes a "Swiss Real Estate Bubble Index" to



→ Point of view

"We're debt free; we've grown a lot organically in the past ten years; we bank on stability and the quality of our work because we aim to be here for the long run." *Alex Wassmer* CEO Kibag

Switzerland's property boom has meant a demand for construction—not just for building houses and apartments but also for upgrading the country's infrastructure and supplying building materials. Kibag sits at the heart of all this, providing a wide range of construction materials and services, plus many other services, including recycling and property management. CEO Alex Wassmer singles out concrete as the company's key area, for a reason that says a lot about his country: "There are significant barriers to entry in concrete; Switzerland is very sensitive about the environment. You have to wait ten years to get the [raw material] extraction permits, but once you start exploiting [the reserves], it pays off."

Alliances with other companies are essential to Kibag's strategy, in particular for major highway and railroad projects. He chooses partners with an eye to their regional strength and past experience of working together. Emerging markets could be a future target. They are preferable to the saturated markets of Europe, a continent Wassmer sees as "a fat cat that has to recover from its sleep."



measure the danger. This instability rose sharply in the first quarter of this year and now sits just below the risk zone. "The main drivers were the jump in home prices, an increase in mortgage debt, and the ongoing flight to real estate as an investment." UBS said. But the government is in a bind-if it hikes interest rates to dampen property demand, then even more foreign cash will flood in, driving up the value of the Swiss franc and hitting the export market hard.

Alex Wassmer, CEO of Kibag, thinks banks learned their lesson during the 1991 real estate bubble and have adopted much more conservative lending policies. Rates may be low, but banks are demanding 25 percent equity. He thinks perhaps the greater Zurich area or Geneva could be vulnerable, but not the country as a whole. "I'm always waiting for that recession. The day will come, but we are hoping for a soft landing."

Luciano Gabriel, CEO of PSP, also points to the legacy

of 1991. Banks became cautious and the government imposed an anti-speculation tax on quick sales. Swiss legalities put a further brake on overheating: "Getting a building permit can take ten to fifteen years; this automatically slows down real estate development and prevents bubbles from happening."

Development of new commercial property also moves sedately. Major Swiss cities like Zurich, Geneva, and Lausanne combine relatively lowrise modern blocks with much excellent architecture from the nineteenth and twentieth centuries, if not earlier, which often are protected. PSP is focusing on redeveloping two former breweries in Zurich as a business center, but Gabriel doesn't see the overall character of the city changing very much, even though investment in renovation will be continuous. "Zurich is very much the same as it was twenty years ago, in terms of real estate, and I doubt it will look much different in another twenty years," he said. ■

Point of view



"Real estate is an interesting sector; it's an area where you can apply economics. Real estate is transparent and long term."

Luciano Gabriel **CEO PSP Swiss Property**

Attention to detail, location, and client solvency have been key to building PSP Swiss Property into one of the country's leading real estate companies, with commercial properties and sites valued at around US\$6 billion.

Luciano Gabriel, a former banker and insurance executive, was attracted to the sector because it is "more down to earth ... more practical."

This pragmatic approach means, above all, a focus on location: "We invest in areas that have long-term growth, and in Switzerland it's easy to see which these are: Zurich, Geneva, Lausanne, and Basel." The company focuses on high-end office and business premises, a tactic that, Gabriel explained, it enables to take advantage of the long term growth of business centres."

PSP, a public company traded on Switzerland's SIX stock exchange, sold off its third-party property management division a few years ago to focus on its core business. "We want to make sure that over time we extract more value than we put in," Gabriel said. "Also, we pay attention to our clients; we have to make sure they will be able to pay the rent."





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Hans-Adam II
Reigning Prince of Liechtenstein



"We face globalization as we faced the industrial age, and the horticultural age a long time before that."

How would you describe the relationship between Liechtenstein and Switzerland?

It's very close. We exchange many ideas and contacts at different levels, from the highest to the very local. Communities and villages have a lot of autonomy; they can cooperate across borders, for example, to establish a common school.

Your 2009 book *The State and the Third Millennium* draws an analogy between government and a service company. Can you elaborate?

If the state wants to survive in a globalized world, it has to know what it can do better than private enterprise or local communities. It's often thought that the people serve the state, but really it should be the other way around; the state should ask 'How can I best serve the people?'

What do you think of globalization?

We face globalization as we faced the industrial age, and the agrarian age a long time before that. All these had major repercussions for how states had to structure themselves, and change.

Can small states like Liechtenstein survive?

Yes, they have now an economic advantage.
They always had to export in order to pay for their imports and therefore had to integrate into the world economy much earlier to be economically successful. Larger states that were able to afford nationalistic and socialistic economic policy much longer now have economic problems with globalization. That explains the fact that the Principality of Liechtenstein has the highest per capita income in Europe and worldwide, if you take out those states that depend on the exploitation of national resources like oil and gas.













Adapting the banking and financial system to a changing world

Switzerland thrives on globalization. It's a favorite for multinational companies and trades with the world. Now, it just needs to resolve a lingering banking secrecy issue with the United States.

s CEO of the Swiss-American Chamber of Commerce, Martin Naville lives on the front line of relations between the two countries. He takes pride in the deep-rooted business partnership and sees scope for this to develop to mutual advantage. He also points to longstanding diplomatic ties and close links between the two countries' world-class universities. But, he says, "we do have this one elephant in the room: the fiscal issue." The ongoing dispute stems from efforts by the U.S. government to stamp out potentially substantial tax evasion by U.S. taxpayers. It has asked Swiss banks for information about accounts, and some tens of thousands of individuals could be involved. Switzerland cooperates with Washington and international organizations in matters of tax fraud, organized crime, money laundering, and terrorism financing, but also in cases of tax fraud, and for a few years in cases of tax evasion. However, these exchanges

of information need to fulfill the strict conditions of the negotiated and ratified agreements to protect Swiss laws and sovereignty. These clear conditions can at times be bothersome or misunderstood by the U.S. authorities, leading to quarrelsome situations. The European Union (EU) of which Switzerland is not a member. has been making similar noises, and Switzerland recently inked an agreement with Germany that some say could serve as a model

Gerhard Schwarz, director of the Avenir Suisse think tank, said that Switzerland's strength in financial services—currently worth some 12 percent of GDP is due mainly to factors like banking competence, political stability, political independence, and the reliable currency: "It is ridiculous to believe that Switzerland's success in the banking market is based only on secrecy. Certainly over the last twenty years, with globalization and the expansion of investment banking, secrecy doesn't play any role"

Prince Maximilian von und zu

Liechtenstein, CEO of the LGT Group, the largest privately owned private banking and asset management group in Europe with about US\$100 billion under management, said that changes in the regulatory environment and client requirements have triggered structural changes throughout the financial services industry: "We have seen that size alone doesn't matter. In the financial crisis there has been a direct correlation between the size of a bank and failure." However, LGT has been largely unaffected: "We had strong and healthy profits that year, 2008, with no balance sheet issues," said Prince Maximilian, who is the son of Hans-Adam II. Originally called the Liechtenstein Global Trust, LGT today operates in thirteen countries worldwide, including branches in ten Swiss cities. and is the family office of the Princely House of Liechtenstein. High-net-worth individuals and foreign pension funds are major clients. "Typical private banking clients have two main interests: wealth preservation and wealth



Quantum leap forward

Best known for its major banks and insurance companies, the Swiss financial sector also offers a rich variety of specialized firms that leverage traditions of security, competence, and confidentiality to serve clients in niche markets around the world.



GARETH FIELDING CEO of Quantum Global Investment Management



"A good day for me is a central bank governor shaking my hand and thanking me for a job well done."

One of four subsidiaries within the Quantum Global Group, QGIM focuses on helping countries with less-developed institutions to manage their hard-currency assets. In particular, that means African and eastern European countries that generate large cash balances, typically from resource exports. "The Bank of England is not going to come to us to manage a bond portfolio; they have hundreds of analysts themselves. But if you were, say, the central bank of "—here Fielding mentioned a few smaller central Asian republics—"you might be a bit short of investment experience." In such cases,

QGIM offers Switzerland's quality, reliability, secrecy, and regulatory strength, together with the more personal service of a boutique compared to a major global institution. Most sovereign clients are looking for long-term rather than short-term returns. And they like anonymity, because one country investing in another can raise eyebrows. QGIM offers regular training workshops in client offices and welcomes client employees for short-term training spells in Switzerland, either at the head office in Zug or the Zurich branch. Far from risking losing clients who decide to go it alone, Fielding sees this

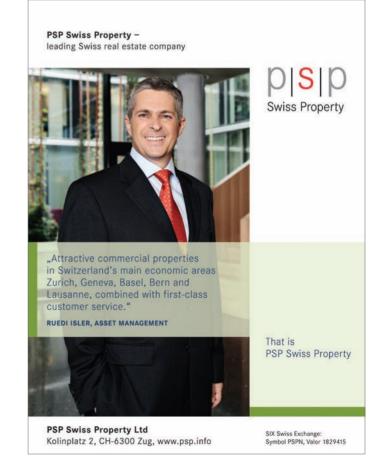
as enhancing the relationship, confident that his specialized risk management and opportunity assessment will always be

Like most of his staff, Fielding chose QGIM after spells with major institutions, prizing the greater client contact that comes with a boutique—albeit a very fast-growing one that is heading for US\$10 billion under management. And he loves the business climate and lifestyle of Switzerland, compared to his native London. "This is a very livable place; we can attract talent from all around the world."

creation. They want to make sure their money is safe when times are tough and the system is shaky; they need robustness to assure them their bank will survive." For Naville, whose Swiss-American Chamber is sometimes an unofficial sounding board for Swiss legislators, what matters is for Bern and Washington to negotiate a good solution so that everyone can get back to business. He reels off the statistics: "The U.S. is Switzerland's second-largest trading partner; Switzerland buys more goods from the U.S. than Sweden, Denmark, Norway, Finland, and Austria combined. We're the seventh-largest customer for U.S. services. In 2010 we were the largest investor in the U.S., and the U.S. has invested more in Switzerland than in China" Wrap in the academic cooperation—Berkeley with ETH, MIT with EPFL—and the diplomatic ties—Switzerland represents American interests in Iran—and the scenario can only be promising. But the U.S. is by no means the only player at the

trade agreements (FTAs) with 35 partners outside the EU. Pascal Gentinetta, president of the Swiss Business Federation, recalled that Switzerland and the United States have discussed a free trade agreement, but the smaller country's highly protected agriculture has been a stumbling block. Now, he said, when China and India look more promising than France or Italy, it is time to go even more global. "Not having joined the EU or the euro zone has left us a lot of room to maneuver to develop and intensify our relationships with other countries." IMF managing director Christine Lagarde said recently that Switzerland offers the world "important lessons . . . Switzerland shows how stability goes handin-hand with growth, how fiscal decentralization goes hand-inhand with monetary union, and how financial sector success goes hand-in-hand with strong oversight. It is a country that shows how cooperation with its neighbors can benefit all."

table. Switzerland has 26 free





Industrial solutions for a better life

Oerlikon provides innovative industrial solutions for the efficient and clean production of Food, Clothes, Transportation Systems, Infrastructure, Energy and Electronics. We develop answers to today's challenges, which include the growth of world population, environmental protection and the development of emerging markets. As Global Player with Swiss roots, Oerlikon is present at over 150 locations in 38 countries. We are proud of our 17 000 qualified professionals who are fully committed to outstanding quality and reliability.

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