CREDIT SUISSE

Scope

CREDIT SUISSE ASSET MANAGEMENT
Q1/2017

New Benefit Potential

Welcome to the Team!
Global Fund for Robotics

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World class

Eric Varvel
Global Head of Asset Management

Welcome to our world of asset management, in which you, dear clients and readers, occupy a very prominent place. The visible expression of this attitude is the newly launched publication "Scope." It will allow you to discover more about the services we offer and will inform you quarterly about important market developments, trends, innovations, and exciting investment opportunities. "Scope" expands and complements the established Fund Newsletter, which will continue to appear monthly.

In the current issue we focus on macroeconomic developments and themes that target investors with different return expectations and risk tolerances. At the same time, we share with you our expertise in implementing investment ideas. In this context, we place great emphasis on proximity to our global clients, for whom our talented and highly motivated specialists want to be flexible, dynamic, and reliable partners.

Our goal is ambitious, but realistic. We desire to be world class in the business that we conduct. To achieve this goal, we have adapted our legal and organizational structures and spun off Asset Management Switzerland into a separate company: Credit Suisse Asset Management (Switzerland) Ltd. The new legal entity underscores the great importance of asset management for International Wealth Management and qualifies for a place among the global leaders in investment management.

We want to achieve the targeted level of growth especially by scaling existing products and through selective expansion with new products. In addition, we will be strengthening the relevant Private Banking distribution capabilities worldwide and also developing more third-party retail channels.

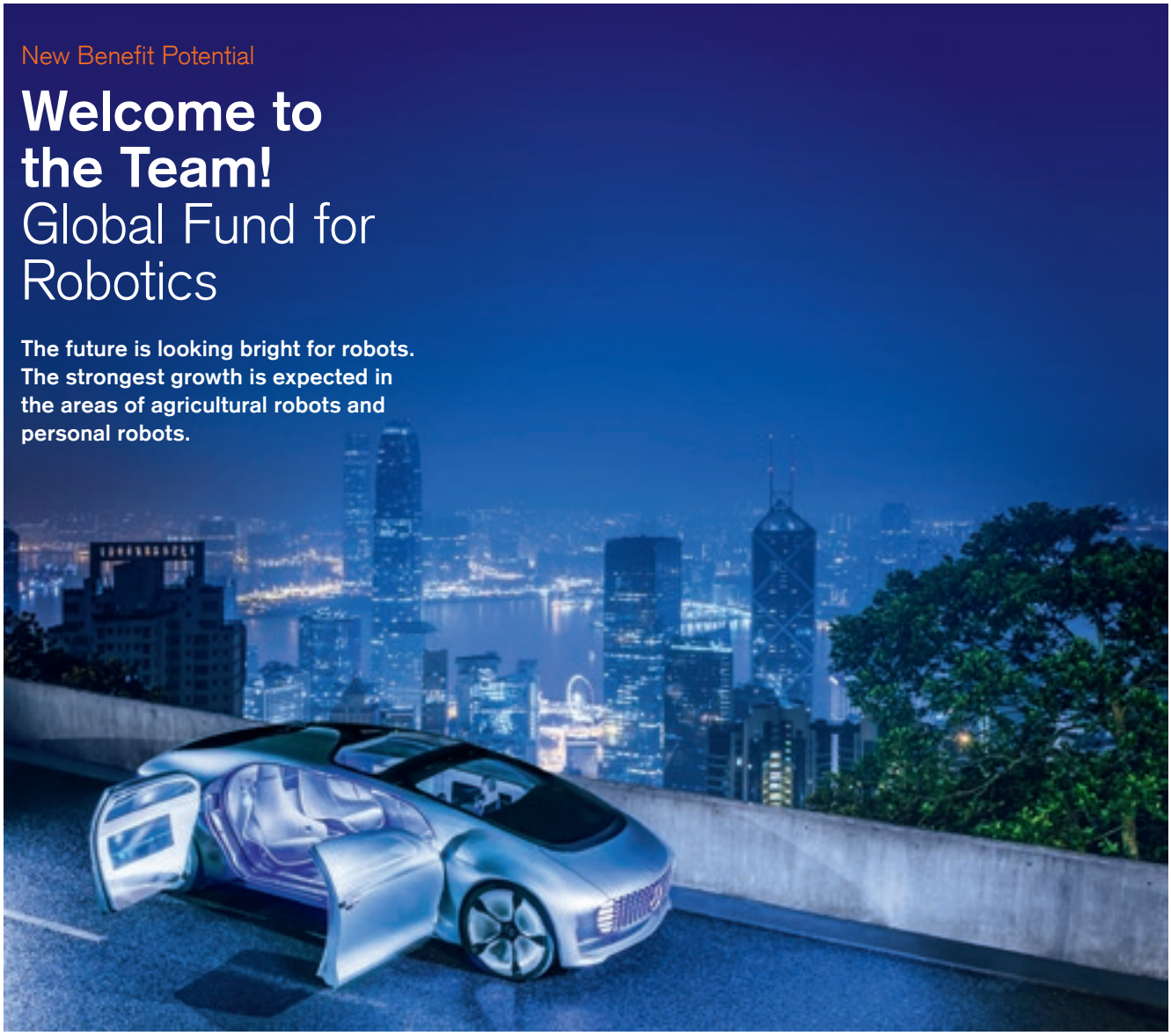
And now I wish you an exciting and informative read.

Eric Varvel

New Benefit Potential

Welcome to the Team! Global Fund for Robotics

The future is looking bright for robots. The strongest growth is expected in the areas of agricultural robots and personal robots.



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Michel Degen
Head of Asset Management Switzerland & EMEA

Michel Degen explains how he and his staff of about 600 intend to achieve their ambitious growth targets, and which investment themes he believes have the greatest potential.

Thematic Investing
Investment Focus on Pure Players

Balanced solutions, real estate investments, alternative fixed equity, and energy infrastructure offer good opportunities for above-average growth. Actively managed funds are trending to specialization and new markets such as Asia.

Investment Solutions
Multi-Manager – the Portfolio Enhancer
Global real estate for institutional investors

Multi-manager products with non-listed, net asset value-based investment instruments have a lower correlation to the stock market than listed products and a lower volatility. This makes them especially interesting for institutional investors.

Miscellaneous

Legal information

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The "disclaimer/important information" at the end of this publication applies to every page of the document.

Michel Degen

Michel Degen has been Head of Asset Management Switzerland & EMEA since September 2016. Previously, he headed Core & Specialized Fixed Income. He studied economics at the University of Applied Sciences of Basel-Landschaft and Basel-Stadt, and has an Executive MBA from the University of St. Gallen. He began his banking career in foreign exchange and treasury at BNP Paribas. From 2000 to 2004 he worked in fixed income at UBS, before joining Credit Suisse. Since March 2017, he has also been CEO of Credit Suisse Asset Management (Switzerland) Ltd.

Adding Value through Innovation and Focus

Interview with Michel Degen
Head of Asset Management
Switzerland & EMEA

With CHF 340 billion in assets under management, Credit Suisse Asset Management is among the leading global providers of investment solutions. The area is one of strategic importance for Credit Suisse. Asset Management Switzerland & EMEA, headed by Michel Degen, manages assets of CHF 230 billion at nine global locations. The aim is further growth in Asia, the Middle East, Germany, as well as in Switzerland. The greatest potential is in balanced solutions, real estate investments, alternative fixed income, and energy infrastructure. In this interview, Michel Degen explains how he and his roughly 600 co-workers will meet this growth target.

Strategic focus on asset management
Michel Degen is aiming for fast international growth and high-performance, innovative product solutions for his clients.

"Digitalization continues to cause problems for many providers. Those who have not managed to make the transformation in the next three to five years will find themselves in a difficult position."

Mr. Degen, you became Head of Asset Management Switzerland & EMEA in 2016. How did you approach your new role?
Michel Degen: I approached the new role with the greatest respect, and bearing in mind that especially in the current environment, the challenges are considerable. It is a lot of fun, and we are seeing the initial results. I am realistically confident.

How would you assess the conditions for profitable growth?
The conditions are good. First, asset management is a strategic focus of Credit Suisse. Second, Credit Suisse Asset Management is an outstanding brand and has a solid foundation. And third, we have at our disposal high-performance and innovative product solutions with which we are able to generate added value for our clients even in a challenging market environment.

What role does digitalization play?
It is a major condition for growth and strategically of the greatest importance. What is crucial is data quality and fast access to data or wide-ranging information exchange based on the push-pull principle, including social media. Social media still play a subordinate role in the financial world compared with other industries. Digitalization continues to cause problems for many providers. Those who have not managed to make the transformation in the next three to five years are going to find themselves in a difficult position.

Are face-to-face meetings still important?
Close personal contact with clients and discussions remain central for us. That is the way we ensure that we also understand the needs of clients precisely and are there for them at all times. For this reason, we are investing heavily in our sales and product specialists: for us, client loyalty and the nurturing of client relationships continue to be the deciding factors for success.

In which geographic markets do you see the greatest overall growth potential?
Internationally, we plan to continue growing substantially in the markets of Asia and the Middle East. Aside from that, we are primarily expanding our services in Switzerland, Germany, and Italy. The potential represented by institutional and professional investors, especially in Germany and Switzerland, is far from exhausted. We will be seeing further and sustainable growth in these markets.

How do you address the needs of clients?
By generating added value and performance, delivering top-quality service, and offering our clients innovative solutions.

Which investment themes do you anticipate will prompt the greatest demand in future?
We see above-average opportunities for growth in the areas of balanced solutions, real estate investments, alternative fixed income, and energy infrastructure. In actively managed funds, the trend is toward specialization – from standard products to specialized products – and toward new markets such as Asia. With absolute return products it is possible, for example, to generate added value and to achieve a positive return independent of market developments. But focus, innovation, talent, and proximity to clients are also needed.

What does the Credit Suisse Asset Management offering include?
We offer solutions in the areas of equities, fixed income, real estate, infrastructure, balanced solutions, index solutions, and solutions in alternative segments. We manage special funds, institutional funds, mutual funds, and also mandates for institutional and UHNWI clients.

How can investors recognize the quality of a fund?
Fund research firms like Morningstar and Lipper provide initial pointers, although the ratings may seem somewhat complicated. Then comes the next step: the investor must understand the fund's philosophy or investment concept. But what is really crucial is direct contact

"For us, client loyalty and the nurturing of client relationships continue to be deciding factors for success."

with the fund manager or product specialist. Last but not least, the fund must fit into the overall concept of the client's portfolio.

At over 7,000 funds, the market offering is huge.
The expansion of the number of offerings in recent years was encouraged by the recovery of the equity and fixed income markets and in addition can be traced back to the numerous funds launched by new players. In the preceding three years we have consolidated or closed around 50 funds. I am convinced that if the investment markets weaken slightly, the wheat will be separated from the chaff. Moreover, the digital transformation will improve transparency and comparability. That will also help in clearing up the funds market.

Which funds are most likely to disappear?
So-called actively managed funds, which create no added value for investors. In particular, similarly themed funds – me-too products – will be at a disadvantage with respect to inexpensive index products.

How do you deal with the growing sensitivity of investors with respect to fees?
The fee structures will have to be overhauled. I am convinced that performance-based fees – that is, attractive basic performance with remuneration for above-average performance – will catch on. Investors are willing, so long as the return is favorable and sustainable.

In actively managed funds, the trend is toward specialization – from standard products to specialized products – and toward new markets such as Asia.

Where do you see asset management in five years?
We are strongly promoting specialization and digitalization of the business, and will be able to generate added value for our clients through commitment, innovation, and investment talent. Asset management is a very attractive business. It requires no separate equity, and generates a steady cash inflow when the quality, performance, and service are good.

Mr. Degen, besides your function as Head of Asset Management Switzerland & EMEA, you are also CEO of Credit Suisse Asset Management (Switzerland) Ltd. What are the goals of that company?
The new company optimizes the conditions for exploiting the growth potential of the asset management business in Switzerland and worldwide. At the same time, it serves to underscore the independence and visibility of asset management.

■ *March 2017*

The Management Committee
The Management Committee of Asset Management Switzerland & EMEA is headed by Michel Degen (center) and is composed of professionals who combine proven expertise with extensive experience in client services.
From left to right:

Harald Réczek
Head of Distribution Switzerland & EMEA

Christoph Schumacher
Head of Global Real Estate

Filippo Rima
Head of Equities

René Küffer
Head of Balanced Solutions

Valerio Schmitz-Esser
Head of Index Solutions

Walter Sperb
Head of Italy

Michel Degen
Head of Switzerland & EMEA

Pascal Schneider
Chief of Staff Switzerland & EMEA

Gebhard Giselbrecht
COO & Head of Strategy Switzerland & EMEA

Daniela Zulauf Brülhart
Head of Marketing & Communication

Luc Mathys
Head of Fixed Income

Karl-Josef Schneiders
Head of Germany

Not shown:
Roland Dörig
Asset Management
Head of Credit Suisse Energy Infrastructure Partners

Roadmap for Returns

Value-added investments in European real estate

Objects with core potential
Although vacancies are low, few new office spaces are being constructed in Frankfurt. As a result, exposure to real estate with higher vacancies appear attractive. Following refurbishments or redevelopments, such buildings can be repositioned as core objects and leased.

Value-added investments aim to generate higher risk-adjusted returns by applying active real estate strategies. They do this by exploiting market cycles, repositioning buildings through refurbishments or leasing up of vacancies, or investing in redevelopment projects.

Zoltan Szelyes
Global Real Estate Research
zoltan.szelyes@credit-suisse.com

Most investors are familiar with value-investing in stocks and bonds. The starting point is to identify assets that are undervalued. Identifying the right assets depends strongly on the information efficiency of the market. An efficient market incorporates all publicly available information, which makes implementing a value-investing approach extremely challenging. In real estate markets, however, information efficiency generally still leaves a lot to be desired. The possible reasons for this include limited market transparency, the heterogeneous nature of the assets, and the inability of investors to go short. This combination of factors provides a good opportunity for applying a value-investing approach.

Capitalizing on market cycles

A value-added investing begins with the identification of markets with compelling valuations and a supportive rental market environment. This includes capitalizing on market cycles and the repositioning of buildings with the aim of reducing vacancies and increasing rental revenues. The process of adding value typically lasts around four years.

Nonetheless, investors must be aware that value-added strategies entail higher risks than core strategies (*see Figure 1*). Returns on value-added strategies react more sensitively to market cycles and to changes in the economic environment. A historical review provides an illustration. Between 2002 and 2006, value-added funds experienced strong returns as a result of the positive market environment. But a substantial overvaluation of real estate assets in the years that followed caused a considerable amount of trouble. The subsequent financial crisis and Euro crisis engendered a sharp correction in real estate values that was made more acute by a credit crunch. During this period, performance in the value-added segment was disappointing. Value-added funds did not recover broadly until after 2014.

Case study: An investment in Frankfurt*

The example of an office building on Querstrasse in Frankfurt, Germany, serves to elucidate the conditions that are considered essential for successful implementation of a value-added approach in real estate. In July 2014, a value-added fund managed by Credit Suisse Real Estate purchased the building. At the time, many real estate investors were avoiding Frankfurt as an office market because of persistently high vacancy rates. Instead, investors were focusing on Germany's other "Big 7" cities, such as Hamburg, Munich, Berlin, Düsseldorf, Cologne, and Stuttgart.

The microlocation and the asset itself were seen as suboptimal by the market, so the building had a vacancy rate of 42% of the total space. The rental contracts in place had short expiry rates, with a weighted averaged unexpired lease term of under two years. Consequently, the fund was able to acquire the property for a price that was substantially below average. The fund then invested in refurbishments of the building with the objective of repositioning the object. In the meanwhile, the Frankfurt commercial property market picked back up. Vacancy rates fell quickly. After just two years, it became possible to rent premises with unexpired lease terms of over four years. Because the building's potential was able to be realized earlier than expected, the fund exited the property in July 2016 at a price that was well above the total investment. On a leveraged basis, the investment delivered a high annual internal rate of return (IRR) of 19.0% to the investors.

** For illustrative purposes only*
Historical performance indications and financial market scenarios are not reliable indicators of current or future performance.

Heterogeneous value-added landscape

Which are the European markets offering value-added investments that deserve a closer look at present? Based on the dimensions "valuations" and "rental cycle," which is what we use in the identification of interesting markets, attention should be directed initially to the UK and Germany.

In the UK we observe a division of the marketplace. Although London is expensive, many markets outside of London are characterized by historically low valuations. In these regional markets, the risks of Brexit will be offset by the slowdown in commercial construction starts and the depressed British pound. Examples include inexpensively valued retail properties outside of London as well as office buildings in stronger regional real estate markets such as Manchester, Glasgow, Bristol, and Leeds.

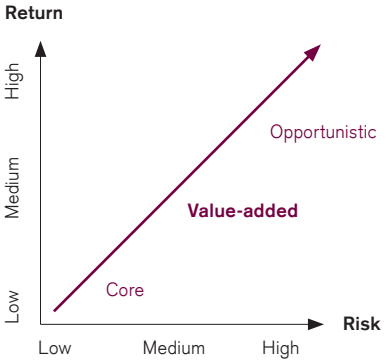
In contrast to the regional real estate market in the UK, a strong appetite for German core properties has resulted in a compression of yields. Here, value-added investors need to rely on more active rental market and development strategies. This is supported by the fact that in recent years, not only have vacancy rates declined but also a substantial amount of redundant office space has been taken out of the market for residential redevelopment. Despite lower vacancy levels, little office construction is under way. Consequently, exposure to real estate with higher vacancies appears attractive. By means of refurbishments or redevelopments such buildings can be repositioned as core objects and leased. In the current market environment investing in development projects for office, mixed use, or condominiums at established macro- and microlocations should also be considered.

By way of diversifying European value-added real estate portfolios, so-called laggards in the European rental cycle are worth considering. These include office buildings in the Netherlands, retail and office properties located outside city centers in Spain and Ireland, as well as office and logistics properties in Eastern Europe, especially Poland, the Czech Republic, and Slovakia. In Italy and Portugal, as a consequence of heightened political risks, weak balance sheets in the finance sector, and sluggish economic growth, a wait-and-see approach would appear to be advisable.

Ingredients for successful value-added investing

- Research know-how to identify promising markets or market segments
- Acquisitions team with an eye for objects that are underappreciated by other investors
- Bidding discipline
- Independent risk management department that can say "no" to deals
- Fund manager in full control of the process and able to execute on the foreseen business strategies with asset management/construction teams on the ground
- Portfolio diversification
- Exiting an asset as soon as its potential has been reached

Figure 1: Three main categories of real estate strategies (for illustrative purposes only)



Real estate strategies can be classified into three major categories:	Core Core strategies generate returns from predictable cash flows due to long-term rental contracts.	Value-added These strategies target real estate that requires refurbishments or redevelopments.	Opportunistic These strategies represent the highest return expectations and risks. The focus is on development projects and/or properties that are less centrally located. Debt finance typically exceeds 70%.
Risk	Low to average	Average to high	High
Debt finance	< 40%	40%–60%	> 70%
Real estate type and location	Existing properties, well tenanted, central and stable returns	Existing properties often with the need for refurbishments or repositioning, new developments in existing locations	Problem properties, development projects, less centrally located or in emerging markets
Holding period	Unlimited	Typically 4–10 years	Typically 3–7 years

Source: Credit Suisse AG

Popular industrial spaces
Successful implementation of a value-added strategy requires being able to identify the embedded potential of a property early on. This may be realized through repositioning assets, for example. Especially popular with start-up companies and the creative industries are spaces with an industrial past that have been renovated and slightly modernized by their owners.

Synchronized Global Economic Upswing

Many opportunities call for clear priorities

Indicators in all the major economic regions are pointing to growth, which continues to favor selected equities but also brings commodities and alternative investments into focus. No slump is expected in the bond markets.

Nannette Hechler-Fayd'herbe
Head of Investment Strategy and Research
nannette.hechler-fayd'herbe@credit-suisse.com

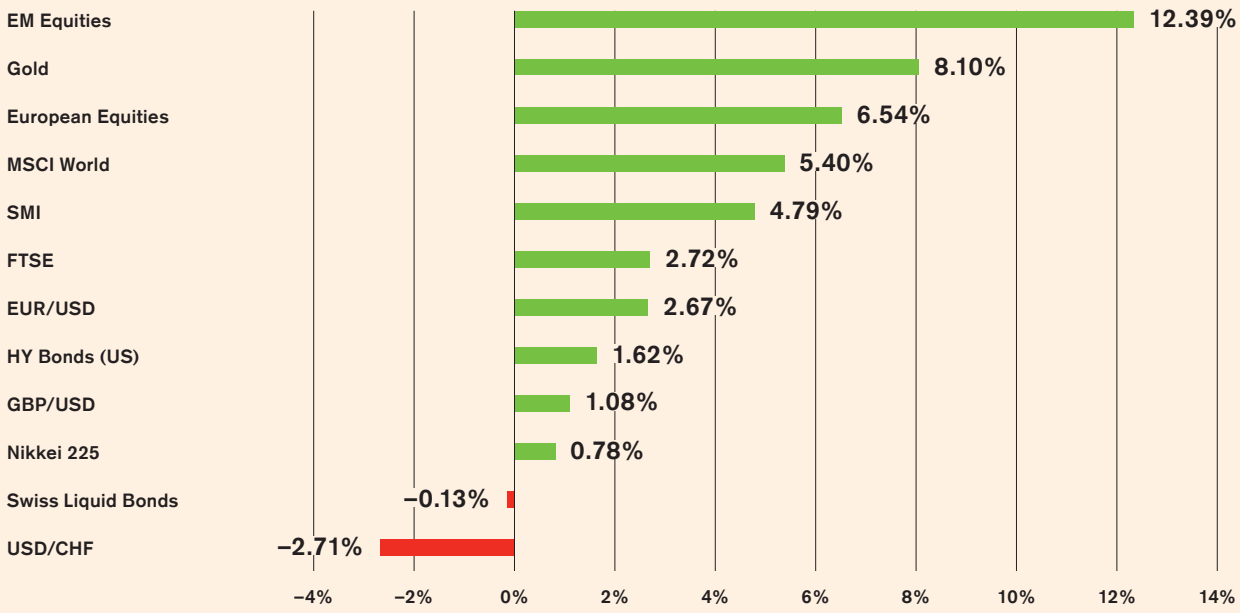
A good start to the year for financial markets
Contrary to 2016, which saw one of the worst year starts for risky assets, 2017 kicked off well, with global equities up more than 6%, and high yield and EM HC bonds up more than 2% and 3% YTD respectively. Not only has a pro-risk sentiment dominated so far but markets have become more confident about reflation. Gold has been among the best performing assets even as yields rose since the beginning of the year. Yield curves have steepened, helping financial stocks, and inflation-linked bonds have outperformed nominal bonds.

Synchronized economic acceleration, but no central bank threat
Economic activity has picked up about everywhere around the world. In the USA, optimism that the new president, Donald Trump, will continue to stimulate the economy with targeted fiscal expenses, corporate tax cuts and deregulation is reflecting positively on consumers as well as businesses. The risk of overheating is simultaneously contained. Although unemployment rates are low, the participation rate has not increased much yet and there is hence still room for job creation without an inflationary spiral. With federal debt at about 100% of GDP, there is not much room for broad-based net fiscal expansion unlike in the eighties, when Ronald Reagan introduced large fiscal stimulation programs. In this context more targeted measures are likely. The risk of a bond bear market triggered by government spending is hence limited. In Europe, consumers have shown great resilience and have been benefiting most from increased bank credit amidst the ECB's monetary stimulation. Emerging markets, contrary to initial concerns about possible changes to international trade policy, have continued to do well. Many emerging markets are in the first place not as exposed to exports as generally perceived. Exports to GDP

Historical performance indications and financial market scenarios are not reliable indicators of current or future performance.

Figure 1: 2017 starts off pro-risk and in reflation mode

Performance of selected asset classes as of March 24, 2017 in local currency



Sources: Bloomberg, Datastream, Credit Suisse AG / IDC

shares are lower than 30% for most of them. Where there are high export sector exposures, these are still very much in commodities. Commodities benefit from a synchronized economic upswing. Emerging markets also have the benefit of a young population with a growing middle class, which gives them a great private consumer base to build on.

Deflation risks moreover have broadly receded, and benign reflation is under way instead. This clears the way for a gradual and cautious normalization of monetary policy, with the US Federal Reserve the first in line among developed central banks. Others will likely follow suit later in the year and gradually unwind unconventional monetary policy. But aggressive tightening seems unlikely. Thanks to energy base effects and still contained domestic inflation, headline inflation will probably start to decline in most countries over the course of the second quarter.

Pro-growth investment strategy: commodities most preferred

The former provides the ideal backdrop for a pro-growth strategy. Of all the assets, we find commodities to benefit most. Stronger growth is positive for commodities, which additionally benefit from lower carry costs than previously. Therefore, we not only recommend owning commodities as part of well-diversified alternative investment allocations but we would actually overweight them now. Cyclical commodities like energy commodities should do particularly well, as supply comes down and refinery activity rises. We believe current prices of oil do not reflect the positive outlook ahead and we regard them as an attractive entry opportunity. Precious metals and gold should in contrast underperform going forward. Increasing real yields and stalling inflation expectations in addition to a strong USD are not helpful to gold or precious metals.

Figure 2: Economic forecasts

Macroforecasts in percent

	GDP		Inflation		Central bank			Short-term interest rates		
	2017	2018	2017	2018	current	3M	12M	current	3M	12M
USA	2.0	2.3	2.3	2.5	0.50 to 0.75	0.75 to 1.00	1.25 to 1.50	1.15	1.1 to 1.3	1.9 to 2.1
Eurozone	1.6	1.5	1.6	1.6	0.00	0.00	0.00	–0.33	–0.4 to –0.2	–0.4 to –0.2
Switzerland	1.5	1.7	0.5	0.5	–1.25 to –0.25	–1.25 to –0.25	–1.25 to –0.25	–0.73	–0.9 to –0.7	–0.9 to –0.7
UK	1.7	1.5	2.3	2.0	0.25	0.25	0.25	0.34	0.3 to 0.5	0.3 to 0.5
Japan	1.2	1.0	0.6	0.6	–0.10	–0.10	–0.10	–0.01	–0.1 to 0.1	–0.1 to 0.1
Canada*	2.0	2.0	1.8	2.2	0.50	0.50	0.50	0.93	0.8 to 1.0	0.8 to 1.0
Australia*	2.6	2.7	1.9	2.0	1.50	1.50	1.50	1.80	1.6 to 1.8	1.6 to 1.8
China	6.5	6.2	2.4	2.2	4.35	4.35	4.35			
Global	3.5	3.6	3.1	2.8						

** SM Libor expect for Australia (bank bill rates) and Canada (bankers' acceptances)*
Sources: Bloomberg, Credit Suisse AG

Constructive but disciplined in equities

Equities are certainly part of a pro-growth investment strategy. We recommend neutral allocations to equities in diversified multiasset class portfolios. Momentum remains strong in equities and flows supportive, but equity valuations have continued to rise without similarly positive trends on earnings. So we recommend rebalancing the portfolios regularly, bringing drift benefits from the rapid rise in equity markets in the dry and keeping equity allocations at neutral weightings. For investors worried about downside risks, volatilities remain low and protection products are therefore relatively cheap.

In tandem with our new energy commodities view, we have added energy stocks recently to our preferred sectors in equities. We further remain positive on healthcare but remain cautious on industrials. Swiss equities have performed well since the beginning of the year and should benefit from a stronger USD and higher US yields over time. Eurozone equities offer great potential as well, particularly upon receding political risks. The region we like least is Japan this year as we believe the Japanese Yen will appreciate and hurt returns in local currency.

No bond bears

We are no bond bears and are sticking to neutral fixed income allocations. Our highest convictions are for investment grade and financial bonds. Emerging market (EM) bonds and convertibles remain good sources of yield, i.e. return, but depending on the Fed's guidance, a more selective approach to EM bonds may have to be adopted in the future. We like EM hard currency bonds slightly better than local currency bonds in the context of a strong USD. Within hard currency bonds, we regard Latam bonds as particularly attractive as sources of high yield. In developed markets, high-yielding sovereigns like Australian government bonds are our favorites. Among our least-preferred bonds, we count German and Swiss core government bonds. Low or in some maturities still negative yields are not an attractive investment proposition in a

Figure 3: Credit Suisse house view (3–6 month horizon)

1 investment grade (IG) ● latest changes
Source: Credit Suisse AG

world of reflation. These are the markets where we recommend duration to be shorter than benchmark. In the USA, yields are at levels where we are entirely comfortable with neutral duration. Longer than benchmark durations would be justified in Australian and UK bonds in our view.

Positive on real estate and hedge funds – private equity offers growth opportunities
We are positive on real estate that now offers good return prospects and is supported by cyclical acceleration. We are, however, cautious on Swiss real estate. We continue to believe in hedge funds that benefit from good liquidity and low risk. For clients who can tolerate the illiquidity, private equity remains an area of added growth opportunity.

In FX, Fed support for the USD, JPY, GBP and Scandies still attractive by their valuation
In FX, the USD will get Fed support over time, particularly against EUR and CHF. But the rates advantage is not sufficient to erase the attractive value in JPY, GBP, NOK and SEK. We are staying positive on these currencies. The dovish Fed helps JPY bulls and will also over time give the GBP its chance to recover. The temporary pause in the USD appreciation is a chance to put up USD-bullish trades, best against EUR and CHF. For those who fear temporary EUR spikes on positive political developments, we highlight the SEK as the best way to handle exposure to positive tail risks in Europe. Finally, for those interested in oil currencies, the NOK, RUB and MXN all offer great value.

Investment Focus on Pure Players

The current investment environment appears to be an exceptionally challenging one. Interest rates remain at a persistently low level. The expected economic growth is rather subdued. Many stocks are already showing high valuations. The desire for a broadly diversified portfolio remains strong. And last but not least, the opportunities for achieving adequate returns at reasonable risk remain limited. Nevertheless, there do exist investment opportunities with an attractive risk-return profile. One such opportunity is thematic investing, which Credit Suisse Asset Management is practicing with increasing success.

Thematic investing functions differently from traditional approaches, which focus only on regions or sectors. Instead, special emphasis is placed on companies that are best positioned to benefit from long-term growth themes. Credit Suisse Asset Management starts with a framework that is underpinned by four structural forces of change. The framework can be organized into six thematic equity funds. These are motivated by the structural forces of change (as illustrated). Two of these thematic equity funds are presented in greater detail in the present publication: Infrastructure on page 22 and Robotics on page 28.


Connectivity
Security & Safety
Luxury Goods
Emerging Consumer
Infrastructure
Productivity
Security & Safety
Robotics
Structural forces of change
Energy Winners
Luxury Goods
Emerging Consumer
Infrastructure
Globalization
Security & Safety
Robotics
Emerging Consumer
Luxury Goods
Demographics

Power Mix for Institutional Investors

Swiss infrastructure investments

To safeguard its energy supply, Switzerland will have to invest CHF 3 to 5 billion annually until 2050. Part of this requirement can be covered by pension funds, which ultimately benefits the population at large. An investment group launched by Credit Suisse in 2014, Credit Suisse Energy Infrastructure Partners AG, points the way.

How do you reconcile financing investments in the energy sector with the search for the right pension fund investments? Credit Suisse has developed and implemented an investment model that meets the demands of both challenges, and in so doing has created a genuine win-win partnership between the energy industry and investors.

Financing gap in the energy sector

Supplying energy to Switzerland between now and 2050 will require investment of CHF 100 to 200 billion. These funds are needed to operate and refurbish existing power plants, to construct new power plants, and to expand and convert the power transmission and distribution network. Each year, the amount of investment required falls short by an average of CHF 3 billion to 5 billion, which energy supply companies cannot raise themselves. The result is a financing gap.

Investment need among pension funds

At the same time, sustained low interest rates and high equity valuations are making life difficult for Swiss pension funds. The security of pensions is being endangered, especially as interest rate reductions to the same extent as previously are hardly thinkable, and stock market prices cannot continue to rise forever. For pension funds, this is an exceptionally challenging environment. If the current situation continues, pensions will be unsustainable. Pension funds will be forced to look around for alternative investments.

Creating a win-win bridge

An investment model developed by Credit Suisse Asset Management establishes a bridge between the energy sector and institutional investors. The focus of the investment is the Swiss energy industry's critical supply infrastructure. Examples include companies that guarantee the security of the regional power supply, import gas, or operate the national electricity transmission network (like Swissgrid). Hydropower also has a place in the investment spectrum. Owing to their unlimited investment horizon, the investments are very long term, and thus address the requirements of both the energy industry and the Swiss pension funds. Only investments appropriate for investors with a conservative risk-return profile are considered.

Power for western Switzerland
The 180-m-high arch dam at Lac d'Émosson in the canton of Valais impounds a lake situated 1,930 m above sea level. With a volume of 225 million m^3, the dam is the second largest in Switzerland. The facility primarily covers the demand for electricity in the western part of the country.

Win-win-win
Financing energy infrastructure through the pension system

The current situation

- In the next few years the energy sector must invest massively in securing the power supply.
- Energy supply companies cannot cover all the financing themselves.
- The public sector neither can nor desires to finance infrastructure to the same extent as previously.
- Traditional financial investors are unsuitable financial partners owing to inadequate matching maturities and higher return expectations.
- Both the low-interest-rate environment and high equity valuations threaten our pensions.

The solution model

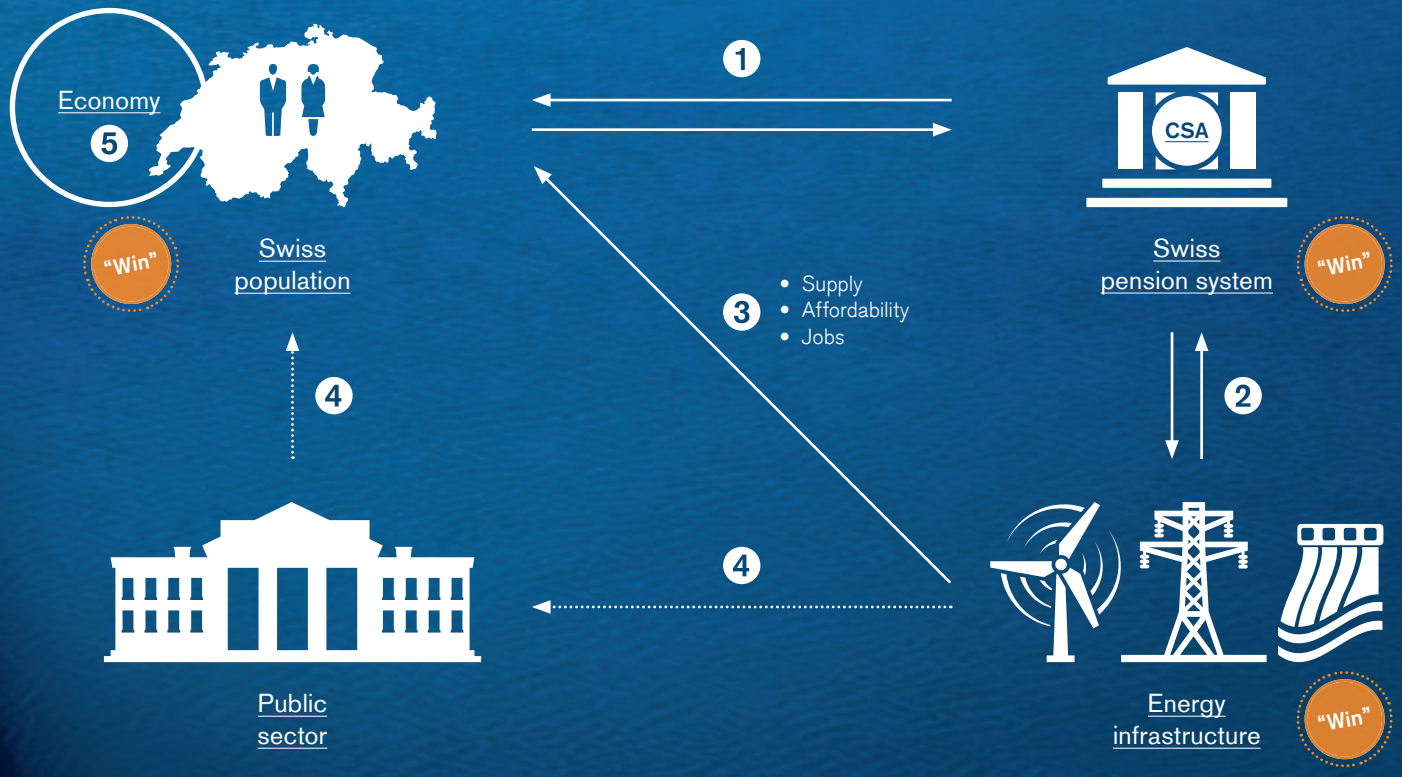
1. The Swiss working population pays contributions to the pension system. The assets saved in this way correspond roughly to the annual GDP of Switzerland. But low interest rates and high equity valuations make investing these funds problematic.

2. Energy infrastructure is a suitable asset class for pension funds. It has a conservative risk profile, yet can still generate relatively attractive, periodic dividends. As with pension fund liabilities, the investment horizon is long term. Energy supply companies receive funds that facilitate investing in plants and adapting their business model, which ultimately ensures supply security.

3. The population benefits on the one hand from lower tariffs and greater supply security, and on the other hand from higher pensions.

4. The public sector frees up capital by selling existing shareholdings. The funds can be used to pay down debt or for other projects.

5. The Swiss population and industry benefit from lower taxes, which boosts consumption and other investments.



Source: "Win-Win durch Partnerschaft zwischen Energiesektor und Kapitalanlegern", presentation delivered 12 January 2017

Partnership with Statkraft
In the next few years, Norway's state-owned energy company Statkraft will realize Europe's biggest onshore wind energy project with a capacity of 1,000 MW. Credit Suisse Energy Partners AG acquired a 40% stake in the project in 2016.

Prompt acceptance
Around 35 Swiss pension institutions have readily taken advantage of the innovative investment opportunity, and in the last year alone have invested over CHF 600 million in a product specially developed for their needs. The portfolio manager is Credit Suisse Energy Infrastructure Partners AG.

Credit Suisse Energy Infrastructure Partners were very flexible in the way they designed the investment opportunities and partnerships, as the following list makes evident:

Investing in existing plants
A power supply company or the public sector can purchase a minority shareholding in an existing plant, thus freeing up capital. Good examples include investment in the national grid company Swissgrid AG and Transitgas AG. Such transactions can frequently be structured in a way that allows the company's internal controls to be maintained.

Investing in new projects
Institutional investors can contribute to financing of projects that without such a partnership could only be realized in reduced form or at a later point in time. The Swiss Investment Group managed by Credit Suisse Energy Infrastructure Partners AG is able to invest up to 25% in new project development. To date, the investment instrument launched in Switzerland has not exercised this opportunity. Meanwhile, in 2016 Credit Suisse Energy Infrastructure Partners AG, the portfolio manager, purchased in the name of European institutional investors a 40% stake in Europe's most extensive onshore wind energy project with a capacity of 1,000 MW. Over the next several years execution of the project will be carried out by Norway's state-owned energy company Statkraft.

Investing in energy supply companies
With the sale of shares to Energie Zürichsee Linth, the city of Rapperswil-Jona guaranteed the regional gas supplier greater commercial freedom, but at the same time retained control over security of the supply. This ensures, for example, that the infrastructure (350 km of gas pipelines) cannot be sold.

The funds freed up can be used by the city of Rapperswil-Jona for reduction of debt and thus indirectly for lowering taxes. In this particular case, debt can be reduced by around CHF 50 million. This in turn reduces annual debt service by around CHF 5 million, which corresponds to a tax multiplier of 6%.

Applicable beyond Switzerland
The investment model used in Switzerland is also suitable for use in other countries. The need for investment in economic infrastructure exists. Worldwide, it is estimated to amount to USD 3.3 trillion annually up to 2030, which is just under 4% of GDP. Between now and 2030, around USD 50 trillion will be needed, including just under USD 15 trillion for energy infrastructure.

The portfolio manager

Credit Suisse Energy Infrastructure Partners AG is a portfolio manager specializing in energy sector investments, domiciled in Switzerland. Through the combination of sector-specific knowledge, an extensive industry network, considerable transaction experience, and core competence in asset management, the Credit Suisse Energy Infrastructure Partners AG team is ideally positioned to identify and successfully implement appropriate investments, taking into account sector-specific, regulatory, and political requirements. To this end, the geographical proximity to the investments, the sector focus, and the familiarity with local conditions are invaluable advantages.

Credit Suisse Energy Infrastructure Partners AG currently manages around CHF 1 billion from some 40 institutional investors in Switzerland and abroad. In Switzerland, Credit Suisse Energy Infrastructure Partners AG has acquired stakes in the national electricity transmission grid and the Swiss compressed natural gas pipeline, among others. The third subscription round for Swiss pension funds – and probably the last for new investors – to purchase shares in the Swiss instrument will close at the end of April 2017. Beyond Switzerland, Credit Suisse Energy Infrastructure Partners AG manages a stake in Europe's largest onshore wind energy project, in Norway, for institutional investors.

Welcome to the Team! Global Fund for Robotics

In many industrial and logistics companies, robots are proving to be genuine drivers of productivity and by now are part of everyday working life. Although robots are not particularly common when it comes to quality of life and security, their potential benefits are recognized. This points to favorable conditions for above-average growth and corresponding investment opportunities.

The trend is unambiguous: Between 1995 and 2008, worldwide sales of robots grew 5.1% per year on average. Between 2008 and 2015, the annual growth rate had already jumped to 9.5% on average. In the next four years, the Credit Suisse Asset Management investment fund focused on robotic companies estimates an increase of 15% per year. All the signs are indicating that the digitalization and (especially) robotization of the economy is proceeding apace across the board. Not only is the trend unambiguous; it is also irreversible. The potential applications for robotics are simply too enticing. "In our view, we are at the beginning of a new industrial revolution that will be led by robotic technology, artificial intelligence, 3D printing, automation, Big Data analytics, and Industry 4.0," says Patrick Kolb, Lead Portfolio Manager of the fund, which was launched in June 2016.

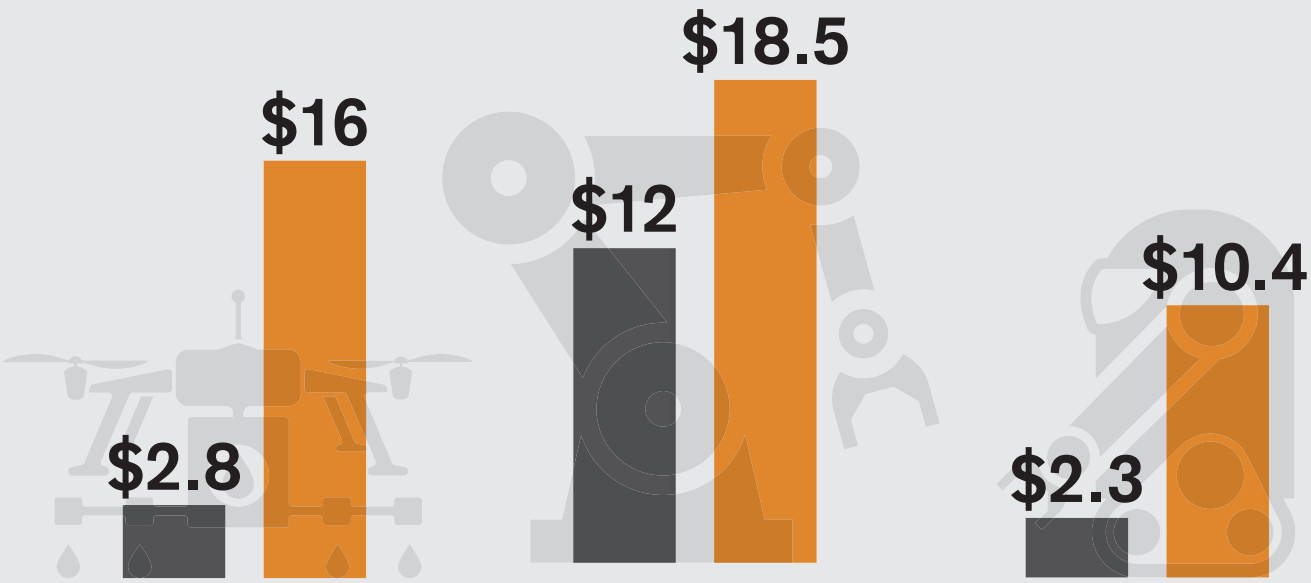
Drivers of growth

The robotic systems business is being driven by a number of different factors. At the top of the list is gains in productivity, which increasingly will have to be achieved through intelligent automated solutions, given the high and rising global manufacturing labor costs in excess of USD 6 trillion. Second, demographic trends and the desire for a higher quality of life are also powerful growth drivers. Robots are increasingly being used in operating rooms, in caring for sick or disabled people, and in other health-related areas of application (*see the interview with PD Dr. med. Martin Bolli, p. 34*).

Finally, an increase in both quantitative and qualitative safety and quality standards is being observed worldwide, which will open up yet further growth areas for robotic systems. Especially attractive for humans is the fact that robots can also be expected to take on dangerous, dirty, or especially burdensome physical tasks.

The rapid rise of robots

Global markets for robots and artificial intelligence
in 2015 and 2020 in USD bn
■ 2015 ■ 2020



Agricultural robots

What began with the automated harvesting of fruit and vegetables has developed into a comprehensive system that extends along the entire agricultural value chain. This system includes drones, field robots, and self-driving farm machines, whose actions depend on a range of factors (climate, soil conditions, weather predictions, etc.).

Industrial robots

Originally, industrial robots were employed primarily for heavy, dirty, dangerous, and repetitive work processes. Today, their precision is superior to that of human labor. Industrial robots are most widespread in the automobile industry. But other industry sectors, such as electronics, e-commerce, energy, and consumer goods, are rapidly catching up.

Personal robots

Personal robots are used to improve individuals' quality of life. These robots enhance mobility for people with physical handicaps, help with household tasks, and thanks to artificial intelligence also have the ability to learn and to interact with humans. A bright future is also predicted for personal delivery robots.

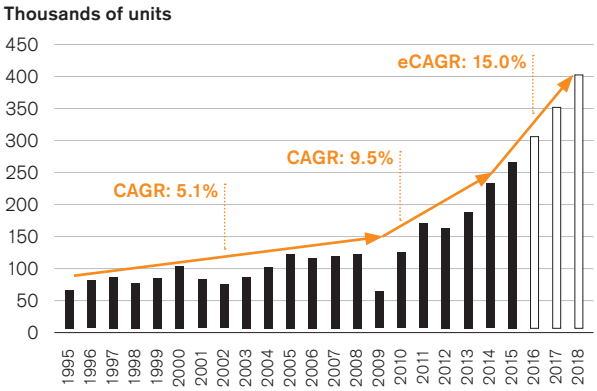
Source: Welcome to the Future: Investing in Robots
https://www.credit-suisse.com/ch/en/articles/articles/news-and-expertise/2016/09/en/welcome-to-the-future-investing-in-robots.html

New division of labor

Already today it is obvious that the digitalization of the economy in general and the introduction of robotic systems in particular are going to change the role of workers. Humans constitute an ever diminishing part of traditional manufacturing and instead are becoming involved in manufacturing processes as developers, knowledge carriers, contractors, coordinators, inspectors, and beneficiaries. "This shift is going to create many jobs in information technology," anticipates fund manager Kolb.

Under the rubric "Industry 4.0" – which stands for the Fourth Industrial Revolution – manufacturing processes and procedures are in the process of being turned upside-down. Business models are emerging that are oriented to new, still unfamiliar value chains. Machines that can communicate with one another will also be able to maintain, optimize, and even repair themselves. The convergence of software and hardware as well as 3D printing is making it possible to produce even small numbers of units or individual pieces cost-effectively. This brings new players and especially software companies on to the scene who likewise see interesting growth potential in advancing robotics.

Worldwide annual supply of industrial robots



Sources: World Robotics Report 2016 of the International Federation of Robotics (IFR), Credit Suisse AG

Advantage da Vinci
The benefits of minimally invasive robotic-assisted surgery have been described in more than 13,000 scientific publications to date. The advantages include less blood loss, fewer complications, shorter hospital stays, smaller incisions for minimal scarring, and faster wound healing.

What robots are good for

Improving productivity
- Manufacturing automation
- Additive manufacture (3D printing)
- Automated transport vehicles
- Autonomous vehicles
- Factory control
- Monitoring and control of plantations
- Advising investors

Improving quality of life
- Robot technology for the OR and rehab facilities
- Prosthetics for extremities (hands, feet)
- Laboratory automation
- Mobile telepresence solutions
- Cloud/payment automation
- Smart toys
- Personal robots with butler functions

Improving security
- Mine clearance and bomb disposal
- Firefighting
- Unmanned air/ground systems
- Search and rescue
- Oil explorations on the ocean floor
- Unmanned aircrafts

How investors benefit

The theme of robotics provides investors with access to an interesting growth market that is strongly driven by increases in productivity. According to estimates by the World Robotics Report 2016 of the International Federation of Robotics (IFR) and Credit Suisse, in the coming years, global sales of robots are set to increase by 13–15% per year.

This is the backdrop for the Credit Suisse Asset Management fund that was launched in June 2016. The fund invests in 30 to 60 companies that generate at least half of their sales through automated solutions for a) improving productivity, b) improving quality of life, or c) improving security. The focus is on market leaders as well as companies with superior technologies and niche players. The investment universe consists of 130 stocks, whereby the objective is to achieve sustainable, appreciably above-average growth. From 2010 to 2016, the investment universe outperformed both the MSCI World Index and the MSCI World Small Caps Index.

During market corrections, the investment universe shows a tendency to underperform in comparison with broad-based stock market indexes. However, such situations generally offer buying opportunities for long-term-oriented investors.

From vision to reality
The Mercedes-Benz F-015 Luxury in Motion offers a vision of autonomous driving in the future. The research car has a spacious interior, and its mobility function transforms the car into a private retreat. The electric hybrid system has a total range of 1,100 km, including around 200 km of battery-powered driving and around 900 km with electricity from the fuel cell.

The F-015 Luxury in Motion communicates with its surroundings both visually and acoustically. Large LED displays at the front and rear as well as a laser projection system directed toward the front are responsible for the visual part. Should the car detect a pedestrian at the roadside who wishes to cross the road in its immediate vicinity at the front, the vehicle shows an undulating light sequence on the LED communication display indicating that it will wait. The acoustic repertoire includes both sounds and specific spoken instructions.

Greatest growth potential found outside the industry

Although demand for robotic technology in the manufacturing industry will continue to grow, the potential for growth is higher in other areas of application. The future of robotics is to be found in medicine, the private sector, the entertainment industry, agriculture, and in self-driving vehicles. According to estimates, between 2015 and 2020 sales of non-industrial robots can be expected to increase from USD 20 billion to USD 130 billion. In the same period, sales of conventional industrial robots could rise up to 50% to USD 20 billion.

This growth will be supported by lower component prices and increasingly more powerful processors. Higher computing power will rapidly drive down the cost of high-quality robots. In addition, programming and reprogramming of robots for specific tasks will continue to become easier. As a result, robots will be cheaper, smaller, more efficient, and more adaptable, which may greatly accelerate their dissemination in private households as well.

Healthcare is an area that is rich in applications for robotics. Examples range from surgical robotic systems and non-invasive radiosurgery systems, to emergency robotic systems, prosthetics, and exoskeletons, to medical rehabilitation systems. In the field of medical surgery alone, demand for minimally invasive surgical approaches is growing as a result of aging populations. The market research firm MarketsandMarkets estimates that the medical robotics market will grow from USD 4.2 billion in 2015 to USD 11.4 billion in 2020. This amounts to an average annual rate of greater than 22%.

“The Operating Surgeon Is Still in Control”

Interview with PD Dr. med. Martin Bolli
Claraspital Basel

"Thanks to the more delicate instruments, robots provide the operating surgeon access to areas that could otherwise be reached only through invasive methods."

PD Dr. med. Martin Bolli

PD Dr. med. Martin Bolli became Senior Physician for Visceral Surgery in 2015. In addition to robotic surgery, he is also specialized in liver and gall bladder surgery, as well as pancreas surgery. Since 2016, he has also served as Coordinator of the German Cancer Society (DKG)-certified Intestinal and Pancreas Center at Claraspital. His professional experience includes working as Senior Physician at the Clinic for Surgery and the Center for Minimally Invasive Surgery, Kliniken Essen-Mitte in Essen, and Clinical Head of Surgery at Bellinzona Hospital, as well as posts at other clinics in Germany and Switzerland. Dr. Bolli studied medicine at the University of Zurich and obtained his postdoctoral teaching qualification at the University of Basel.

Claraspital Basel

Claraspital is a privately run acute-care hospital in northwestern Switzerland. It has two centers – an abdominal center and a tumor center – and is a reference center for obesity. Since its founding in 1928, Claraspital has been owned by the Congregation of the Sisters of Mercy of the Holy Cross, Ingenbohl. claraspital.ch

Dr. Bolli, Claraspital has been practicing robotic surgery since 2015. How do patients react when you discuss the role of the robot with them prior to an operation?
Dr. Martin Bolli: Most patients are very interested. They understand that robots are technological aids under the control of the operating surgeon.

What concerns do you hear most frequently?
There are patients who think that the robot carries out certain movements automatically and without the intervention of the operating surgeon. Some patients even fear that the robot makes decisions on its own at the operating table. But such concerns are easy to dispel during the discussion.

For which operations do you use robots?
Operations involving the breast and abdominal area, the esophagus, and the intestinal tract. These are operations primarily in areas that are anatomically very difficult to reach, and that can be performed more precisely and less invasively with better visualization and enhanced motion control.

In what ways do robots alter the tasks and responsibilities of the operating team?
Now, as previously, the responsibility rests with the operating surgeon. He is still in control. However, he no longer works directly beside the patient. Rather, he is a few meters away in the cockpit, where he performs the operation at the console.

Compared with traditional laparoscopy, what are the most important advantages and disadvantages of a robot-assisted operation?
One very important advantage is the visualization system, which is three-dimensional, with very high definition, and allows multiple magnifications. In addition, the robot can make certain movements, such as around corners, more flexibly. Thanks to the more delicate instruments, the robot also provides the operating surgeon access to regions that could otherwise be reached only through invasive methods. The disadvantages are obviously the time-consuming preparation and the longer duration of a robot-assisted operation, which reduces the number of possible surgeries in the OR.

What are current limitations of the robot?
Unlike in laparoscopy, with a robot there isn't any tactile feedback. For instance, when the operating surgeon moves some tissue, he feels no resistance. He must compensate this missing haptic sense using his trained eye and his manual experience.

"Intuitive Surgical, Inc. is very application-oriented, is eager to interact with surgeons, and is capable of bringing significant innovations to market."

Do the advantages come into play only during very complicated operations, or also during simpler, more routine operations?
Only during complicated operations. There are no advantages to using the robot for simple, routine operations.

Which robots do you use, and what is the reason?
We use Intuitive Surgical, Inc.'s da Vinci Xi® model. To my knowledge, this producer is a pioneer in the robotic surgery that we perform. At least, I don't know of a comparable system by any other producer.

What convinced you to go with da Vinci and Intuitive?
The company is very application-oriented, is eager to interact with surgeons, and is capable of bringing significant innovations to market.

An example, please.
The operating table suited to the robot. If the patient is moved during the operation, the robot automatically adjusts to the new positioning and doesn't have to be readjusted and reprogrammed again.

What is the impact of robotics on the operating room in terms of cost-effectiveness?
A robot costs around CHF 2 million, and an operating table around CHF 200,000. One also has to figure that there are maintenance costs, software updates, supplies, and so forth. The investments and costs are considerable. To date, there have been no reliable studies reporting the benefits and long-term cost savings.

What might give rise to cost savings?
They could result from the fact that the operations are minimally invasive, that they cause fewer complications, that they shorten recovery times and hospital stays, and finally because they make it possible for patients to return to work faster.

How are education and training in robotic surgery conducted?
In close collaboration with Intuitive. At Claraspital, a training and reference center is being planned.

Finally, a personal question: In your day-to-day life, do you have a weakness for robotics and high-tech products?
No. I'm an ordinary smartphone, laptop, and car navigation system user.

■ *March 2017*

Intuitive Surgical, Inc.
The company was founded in 1995 to further develop and commercialize the da Vinci system. da Vinci was first developed at the former Stanford Research Institute in the 1980s, under contract with the US Army, with the aim of enabling battlefield surgery to be performed remotely.

Following an initial public offering in 2000, Intuitive Surgical became a listed company on the Nasdaq. Around 4,000 Intuitive robotic systems have been installed worldwide, used by around 35,000 specially trained surgeons. Approximately 4 million patients have experienced this method of operation. Intuitive's headquarters are in Sunnyvale, California. The European offices are in Aubonne, Switzerland, and Freiburg, Germany.

Multi-Manager – The Portfolio Enhancer

Global real estate for institutional investors

Institutional investors who wish to invest in global real estate assets need look no further than multi-manager products with non-listed, net asset value-based investment instruments. These products are more weakly correlated to the stock market than listed products and have lower volatility. They have the potential to enhance classical portfolios.

Fabian Stäbler
Business Manager
fabian.staebler@credit-suisse.com

Sven Schaltegger
Lead Portfolio Manager
sven.schaltegger@credit-suisse.com

Corporations such as Nestlé, Novartis, and Schindler are understood to be Swiss companies. BMW is German, Michelin is French, Pirelli is Italian, and Google is American. The geographical breakdown of these companies results from their origins and the location of their headquarters. But their business models and earnings are multinational. Their strongly international presence and the growth potential of the foreign markets make these companies attractive.

In real estate, such considerations are frequently much less common. Even institutional investors tend to stick disproportionately to their domestic markets ("home bias"). This is confirmed by figures from Switzerland. Whereas about 60%[1] of the stock holdings of institutional investors are placed internationally, on average real estate investments constitute only about 5% of that amount. All told, foreign real estate accounts for just over 1% of Swiss pension fund portfolios out of a permissible 10% of total investments.[2] In comparison, in the Netherlands, professionally managed pension funds invest nearly 60% of their real estate allocation abroad.[3]

The positive effect of international real estate

Many investors have a tendency to see only the risks of international real estate and are unaware that it has a low correlation to asset classes such as stocks, bonds, and frequently also to real estate in their own country. Experience shows that the addition of international real estate investments improves the risk-return profile in basically any portfolio. The investment universe is composed of many different countries, cities, and currency zones, as well as a wide range of real estate markets in different cyclical phases. Consequently, it is possible to mitigate market fluctuations, which increases the effect of diversification. Global real estate investments have the potential to enhance classical portfolios.

This is especially true for pension institutions, which have a long-term investment horizon and are dependent on stable and predictable cash flows. Over the past ten years, direct investment in global real estate has been able to generate an average return of 6.5% per year. And this despite a volatility rate of only 7.3%.

1 Swiss Federal Statistical Office: "Die berufliche Vorsorge in der Schweiz – Pensionskassenstatistik 2013"
2 Verordnung über die berufliche Alters-, Hinterlassenen- und Invalidenvorsorge (BVV2), Art. 55
3 Ausland als Alternative, Sven Schaltegger, Handelszeitung, June 16, 2016
Historical performance indications and financial market scenarios are not reliable indicators of current or future performance.

Even the biggest financial crisis since the 1930s, which occurred during this period, had little impact over a time horizon of several years.[4] Hedged back to Swiss francs, performance during the same period consistently amounted to 5.9% per year, with a volatility rate that was even slightly lower.

Investing in real estate assets also provides the long-term-oriented investor with some measure of inflation protection, because many rental contracts allow rents to be adjusted for inflation over the medium term. This can be very attractive in the current environment, where once again inflation is expected to rise in many places.

Indirect real estate investments

One explanation for the reluctance of institutional investors with respect to international real estate investments is that this investment universe is difficult to access. Owing to the necessarily high investment volumes and the lack of local expertise, for most investors direct investments may be neither viable nor practical.

The easier way may be through indirect real estate investments, for which there are many years of experience. Over the last 12 years, Credit Suisse Asset Management has successfully expanded the area of indirect real estate, which specializes in indirect real estate investments in Switzerland and internationally. The offering also includes a multi-manager product for Swiss pension funds.

Multi-manager products – the innovative solution

A single investment provides investors with access to a global portfolio, thus covering the "global real estate" asset class straightforwardly and efficiently. One option that is optimally suited to Swiss institutional investors is a multi-manager product that invests in non-listed net asset value-based real estate funds. Non-traded real estate funds are different from publicly traded investments (REITs) particularly with respect to liquidity and volatility. Non-listed real estate funds typically have a lower correlation to the stock markets and exhibit moderate volatility. Nonetheless, it must also be taken into account that the level of liquidity with these investments is lower. Currently, there are several hundred real estate funds that are open to institutional investors. Some 300 of these are core funds, which do not have a fixed term and normally offer investors the quarterly possibility of redemption, and consequently liquidity.

Before making an investment in any non-listed real estate fund, it is important to carry out rigorous due diligence. In particular, the track record of the manager, the quality of the real estate portfolio, and the evaluation of the respective market should be scrutinized. In this regard, core funds are evaluated differently from value-added funds and opportunistic investment funds, which have a restricted term and a higher risk-return profile compared with core funds. Value-added funds typically employ leverage of between 40% and 60%; with opportunistic funds, leverage may even exceed 70% (*see also Figure 1 on page 14*). The funds focus less on the achievement of stable returns from rental income than on striving to use asset management to drive value growth that will be realized through the sale of the real estate toward the end of the life of the fund.

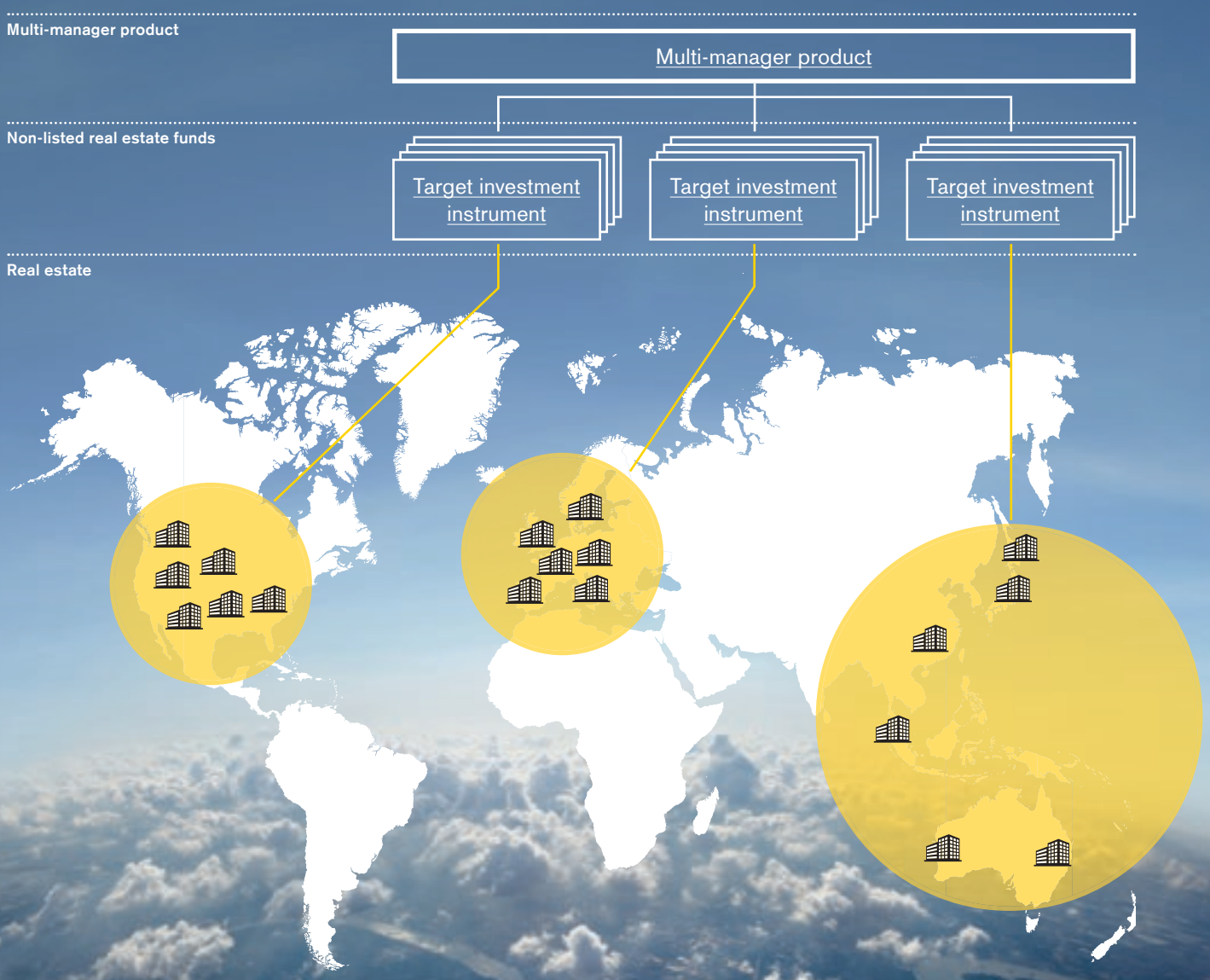
In October 2016, the newly launched multi-manager product was successfully placed with nearly 70 Swiss pension funds in the amount of CHF 362 million and will be open for additional capital commitments in first quarter of 2017.

4 Ausland als Alternative, Sven Schaltegger, Handelszeitung, June 16, 2016

The Advantages of the Multi-Manager Concept

Access to a global real estate portfolio through a single investment

- Access to select private real estate funds and top real estate managers worldwide
- Research-supported, active management
- Structured investment process and a professional, dedicated investment team with an outstanding track record
- Highly diversified by regions, sectors, managers, properties, rental segments, and market cycles
- Access to the global network and know-how of Credit Suisse Asset Management
- Broadly diversified Core+ approach makes it possible to benefit from higher-return funds (value-added and opportunistic) without appreciably increasing risk.



Source: Credit Suisse AG

International Real Estate Markets with Potential

Fredy Hasenmaile
Head of Real Estate Economics
fredy.hasenmaile@credit-suisse.com

Led by a robust economy in the USA, the indicators are good for a moderate acceleration of the global economy. Real estate investments may benefit from this positive development, especially given that the strong appreciation in real estate resulting from years of sinking interest rates is now behind us. Markets with future potential are above all those that can demonstrate solid growth in rental income now or can expect it.

USA

The USA is one of these markets, even though the interest rate turnaround is already a fact and caution is advisable particularly with indirect investments. The latter may be sensitive to anticipated further interest rate increases in the coming year. Actually, the real estate cycle in the USA is already relatively far advanced. But the expected fiscal stimulus could work to prolong the cycle, such that direct investments are still worth considering.

Continental Europe

In Europe, selectiveness is called for. In Germany, Holland, and in the Nordic states, good economic performance against a backdrop of merely moderate expansion of space could lead to ever fewer vacancies and, consequently, substantial rent increases. The accommodative monetary policy of the European Central Bank may keep interest rates low for the time being. Retail properties should benefit from lower unemployment and the gradual pickup in the economy. Nonetheless, investors are advised to focus on highly frequented locations, since they are less affected by the trend toward online shopping and may even benefit from it. In the rest of Europe, in our view, the political risks have not yet been fully factored in.

UK

The UK is an interesting market at present. British REITs have recovered somewhat from the shock of Brexit, and uncertainties have not yet been factored in. British real estate stocks are trading at a discount of around 17% from their net asset value, which is below the historical mean value. If the anticipated drop in demand for business space as a consequence of Brexit should fail to materialize, British stocks may succeed in posting gains. At the moment, however, absorption in the London office space market leaves something to be desired, as attested by the moderately increasing vacancies on the Thames. Despite continued good economic data, the demand for space has not yet rebounded from Brexit. Should a substantial number of jobs be moved out of the British capital, our view is that in addition to the German cities, in particular Paris, Amsterdam, and Dublin will be among the beneficiaries.

Asia

In Asia the outlook for real estate investments is mixed. In our view, the upside potential for Japanese real estate stocks is largely exhausted, following a rally in the second half of 2016. Experts are divided regarding how well Tokyo will be able to absorb the expanded supply that is expected toward the end of 2017. Singapore could be interesting for investors with a long-term horizon. The city-state is struggling through a crisis of economic transition, but the chances are good that it will be able to work its way out of the cyclical slump. For investors who are not averse to risk, emerging countries offer interesting prospects, in particular China. Chinese real estate stock valuations are at historically low levels. In contrast, the high level of indebtedness and negative cash flows of Chinese real estate companies represent risks that are difficult to estimate. The key question is whether the Chinese government leadership can manage to achieve a smooth transformation to a more service-oriented economy without greater frictions.

Timeout

The signals from the Paris real estate market are contradictory at present. Following the sharp decline in net returns for office and retail space in recent years, a "wait and see" attitude appears advisable, at least until the outcome of the presidential elections is known.

"The Wake-up Call Came in 2007"

In conversation with Burkhard Varnholt
CIO Switzerland, Acting Global CIO,
Vice-Chairman of the Investment Committee of
Credit Suisse

Burkhard Varnholt on American consumers, the Pax Americana, the invisible hand, and small and mid caps

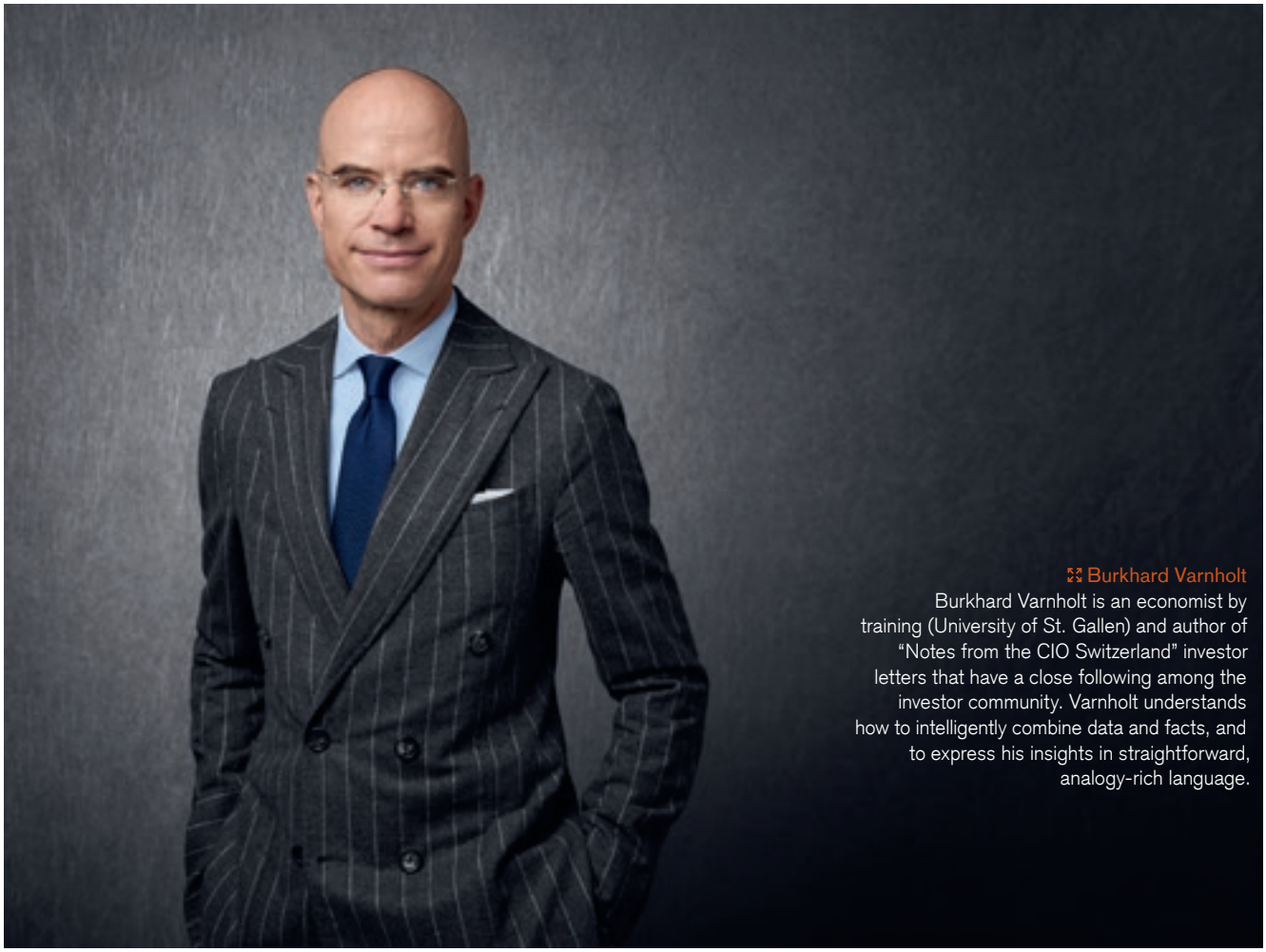
The end of the symbiotic trade relationship between China, South Asia, and the US is invigorating the economic and trade dynamic of traditional export markets. A multipolarity is emerging that is sparking decentralized motors of growth. Nonetheless, although the US current account deficit may have peaked, it continues to be the highest worldwide.

"The Americans are the greatest consumers you can imagine," says Burkhard Varnholt, pointing out that between 1982 and 2008, the US current account deficit rose from USD 40 billion to USD 800 billion. It has since declined to USD 730 billion. In retrospect, for years the current account deficit represented a win-win situation: the inexpensive goods that the Americans were able to import from Asia proved to be a boon to consumption. For Asians this consumption represented a lifeline that brought enormous amounts of human capital to the global labor market as well as huge payments in US dollars.

A substantial portion of these dollars flowed back toward America; they were recycled. Just like the savvy salesman who advertises his products while simultaneously offering to lease them, the Asians were financing Americans' consumption. Even today, the Chinese still hold the highest foreign exchange reserves in the world.

Pax Americana

These developments went hand in hand with the Pax Americana. There was a clear world order in which a dominant America protected not only itself but all strategically relevant trade partners, and promoted free trade. This was the understanding that prevailed throughout the



Burkhard Varnholt
Burkhard Varnholt is an economist by training (University of St. Gallen) and author of "Notes from the CIO Switzerland" investor letters that have a close following among the investor community. Varnholt understands how to intelligently combine data and facts, and to express his insights in straightforward, analogy-rich language.

entire postwar period. With the financial crisis of 2007, that dominance came to an end. "For the first time, the Asians realized that the wheel they were turning by means of the finance recycling entailed a huge risk," says Varnholt. He specifies: "The US Treasury bonds, which the Asians held USD 4 trillion of, represented a large cluster risk. The wake-up call came in 2007: the system was not as stable as it had seemed in the previous 60 years. Globalization experienced its first big challenge." The US financial crisis was a twofold hardship for Asia and the emerging economies. First, they could no longer export as much, which was reflected in the decline of the American current account deficit from USD 800 billion to USD 730 billion. Second, their financial investments took on an ambivalent character.

"Like the savvy salesman who advertises his products while simultaneously offering to lease them, the Asians were financing US consumption."

Because the Americans were no longer prepared to play the role of global hegemon, always stepping in and taking charge of the rest of the world, they came up with the narrative, as Varnholt puts it, that the emerging economies were to blame for the financial crisis and the problems in America.

The Pax Americana is probably over, although the US government's avowals to strengthen NATO in the Western world can be interpreted otherwise. Who will fill the vacuum that will follow in the wake of the Pax Americana? Varnholt is optimistic and assumes that a solution will be found: "There are still millions of entrepreneurs who want to do business together. These entrepreneurs are the motor of globalization today. Now, more than ever before in history, the world's six billion people want to take destiny into their own hands. Globalization will continue, only not in a bipolar but rather a multipolar manner."

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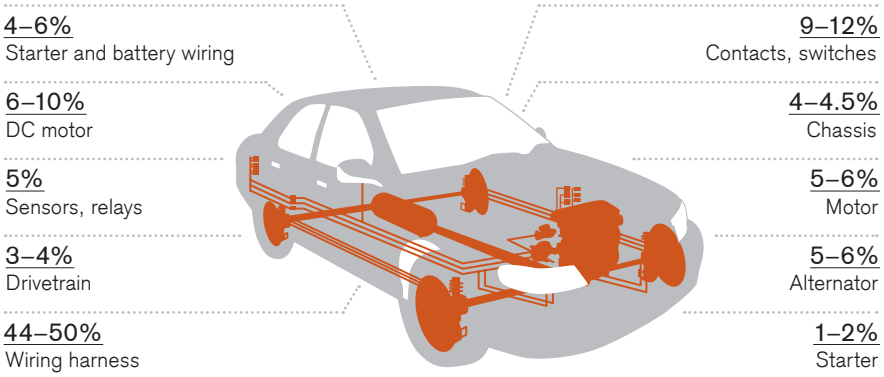

From 20 kg to 40 kg
The copper content of the average passenger car is set to increase from 20 kg to 40 kg in the next few years, as a consequence of the proliferation of hybrid vehicles and purely electric-powered cars.

Source: Deutsches Kupferinstitut

The invisible hand

In this context, the question arises how a current account surplus might come about. "Through the invisible hand," says Varnholt. He's referring to the English economist Adam Smith (1723–1790), who believed the market to be a self-organizing and self-regulating force. The invisible hand enables those countries with competitive advantages in specific product or service segments to produce more and to export as long as their goods are cheaper than those of other countries. This advantage can be made to disappear if the buyer countries develop competitor products, or through changes in exchange rates.

> "Mercantilism is an attempt by governments to impose an industrial policy of national champions."

In practice, however, the invisible hand is readily shoved aside when the balancing effect of free competition becomes constrained, for example, through political measures or special economic interests. In such an environment, mercantilism finds fertile ground. Mercantilism is an attempt by governments to impose an industrial policy of national champions.

Should investors jump on the bandwagon and invest in such corporations? "Most of these are poor investments," says Varnholt. But investors must indeed wonder whether there are any companies that are not influenced by mercantilist tendencies. That brings them quickly to small and mid caps, which often have less exposure internationally than large caps.

Small and mid caps

According to Varnholt, small and mid caps have some structural catching up to do. And this is for two reasons. First, institutional investors are nearly always underweight small and mid caps because they are strongly invested in index assets, which generally hold few of these securities. Second, investors are usually underinvested in foreign assets. Conversely, investors are typically overweight in their domestic markets and in large caps.

Mining for modern life
Its extremely high electrical conductivity makes copper a star among metals. Without copper, there would be no smartphones, no laptops, no energy, no pleasant climate, no cars, no home technology, and no exciting architecture. As a relatively flexible and simultaneously resilient metal that is easy to process and to shape, copper is used worldwide for a whole range of different products and technologies.

Although the price of copper is susceptible to major fluctuations, there will always be demand on account of the great need for new technological developments. Examples are the promotion of renewable energies and electric cars. "Given the rapid rise in battery demand, we expect a shortage in the supply for lithium, graphite, and cobalt. However, copper and aluminum should also benefit from this trend. Electric vehicles are up to three times as copper-intensive as internal combustion vehicles," explains the Credit Suisse Global Equity and Credit Research Team (*"Beneficiaries of the Electric Vehicle Boom," November 6, 2016*).

Global commodity producers such as Anglo American, BHP Billiton, Glencore, Rio Tinto, and Vale are likely to benefit from the increasing demand for metals. Stakes in the Escondida copper mine in the Atacama desert in Chile (see Figure), the world's largest, are held by BHP Billiton (57.5%) and Rio Tinto (30%). The Escondida open-pit mine was inaugurated in 1991, and based on data from BHP Billiton has since processed more than two billion tons of ore.

Mr. Varnholt, Will This Be the Decade of Commodities and Emerging Markets?

"Commodities exacerbate economic cycles. At the same time, the global economy depends on commodities. Consequently, commodities are increasingly in competition with new technologies.

In other words, the age of fossil fuels is not ending because fossil fuel resources are running out. Just as the stone age did not end because of a lack of stones, but because humans developed new technologies and ushered in the metal age.

Although less dependence on fossil fuels may be disadvantageous for producing countries in the long term, from an ecological perspective it is to be welcomed. The world must decrease its ecological footprint.

In the meanwhile, the CRB commodity futures price index is at its highest point since 2014. This rebound is not just a technical price correction. Rather, it reflects a solid economic development, especially in developing countries, which use the most commodities. The Emerging Markets MSCI Currency Index is also up: in the space of a year it has appreciated by almost 6%. This, too, is an indication of the more robust state of these economies in the face of declining exports.

Emerging market equities are interesting not only because they have risen more than 25% in a year. Also, and in particular, the inverse correlation to the US dollar appears to have broken. Whereas in the past emerging market stocks were the worst affected by the strong US dollar, last year's dollar strength had little effect on their upward trajectory."

Historical performance indications and financial market scenarios are not reliable indicators of current or future performance.

Humans and Machines
Who's afraid of clever robots?

Dr. David Bosshart
CEO GDI Gottlieb Duttweiler Institute

A spectre is haunting us. Intelligent machines are stealing our jobs. Soon they will replace humans entirely. Reason to panic? Hardly. Fear leads to submission and is ultimately never a good mind-set for change. We should maintain a respectful distance, of course, and keep on asking critical questions. But we should also set higher standards for ourselves. Remember, it is only thanks to intelligent machines that we are starting to understand what it means to be human. In fact, never before have we attended to the interests of humans as affectionately and precisely as we do now.

Moreover, compared with machines, we still have many advantages. We are physically anchored, sentient beings; we are able to grasp emotional context and also have spatial intelligence. Robots, on the other hand, have to learn all that painstakingly. They are very bad at context and at fine motor movements. In situations where humans coordinate and orient themselves intuitively, robots are weak. Consequently, it will probably be a very long time before they replace forestry workers, who move about in a complex topographical setting.

The occupations that should be developing preventative strategies are thus those that function independent of context: accounting, for example, simple legal tasks, purely transaction-type jobs, but also many communications tasks. Whatever we can rationally explain and understand can also be made into an algorithm or be programmed. The algorithms are just becoming longer and more complex.

Is that reason enough to be fearful? Here, too, history has something to teach us: Every new technology creates new needs and thus new jobs again – ones that we cannot even imagine today. If at the same time we can obtain more and more with less and less, we will also be less dependent on increasing income or wealth to lead a good life.

There are many reasons to be cautious and to observe developments from a distance. But only if we believe ourselves to be insignificant or even inferior, and if we fail to demand the best of ourselves because it makes us uncomfortable, will the machines actually win.

Christoph Schumacher New Head of Global Real Estate

Christoph Schumacher has been appointed the new Head of Global Real Estate at Credit Suisse Asset Management (Switzerland) Ltd. as of June 1, 2017. He was previously Managing Director at Union Investment Institutional Property GmbH in Hamburg, in charge of the Institutional Business and a member of Union Investment's Real Estate Investment Committee. From 2005 to 2011 the 47-year-old German national worked for Generali Real Estate in Cologne, Luxemburg, and Paris. Prior to that he was a lawyer for Linklaters in Berlin and London. From 2000 to 2001 he was a personal advisor/office manager to the minister of finance in Berlin. Schumacher will be reporting to Michel Degen, Head of Credit Suisse Asset Management Switzerland & EMEA and CEO Credit Suisse Asset Management (Switzerland) Ltd. "Our market leadership in Switzerland, combined with Christoph's global expertise, provides an ideal basis for our international expansion," said Degen.

Credit Suisse Asset Management (Switzerland) Ltd.

Credit Suisse Asset Management (Switzerland) Ltd. is the new Swiss legal entity to which Credit Suisse AG has transferred its Asset Management Switzerland business. The new entity began to operate under its own license as an asset manager of collective investment schemes at the end of March 2017. Michel Degen has been appointed CEO of Credit Suisse Asset Management (Switzerland) Ltd. in addition to his existing role as Head of Credit Suisse Asset Management Switzerland & EMEA and continues to report to Eric Varvel, Global Head of Asset Management.

The new company will allow the Switzerland-based Asset Management businesses to exploit their full growth potential both in Switzerland and globally. Credit Suisse Asset Management (Switzerland) Ltd. represents a key part of the new holding structure jointly owned by Credit Suisse (Schweiz) AG and Credit Suisse AG. The Board of Directors of Credit Suisse Asset Management (Switzerland) Ltd. will consist, among others, of Bruno Pfister (independent) as Chairman, Peter Norley, Global Chief Operating Officer of Credit Suisse Asset Management, as Vice Chairman, and Rudolf Noser (independent), recognized expert in IT and member of the upper house of Swiss Parliament.

28 Lipper Fund Awards for 2017

Six Credit Suisse Asset Management Swiss and European funds have received no fewer than 28 Lipper Fund Awards for 2017. Through this prestigious prize, the Thomson Reuters Lipper Fund Awards honor funds and fund management firms that have delivered above-average risk-adjusted performance for their investors. At the same time, the awards highlight both Credit Suisse Asset Management's comprehensive investment expertise and its strong and consistent track record.

lipperfundawards.com

Success at Mannheim and Vienna Conferences

Credit Suisse (Deutschland) AG, which manages asset management portfolios and mutual funds for investors and professional wealth advisors, used its presence at the "FONDS professional KONGRESS 2017" in Mannheim and Vienna to maintain existing contacts and to build new client relationships.

Dr. David Bosshart, CEO of the Swiss Gottlieb Duttweiler Institute, gave talks at both conferences at the invitation of Credit Suisse (Deutschland) AG. The internationally renowned futurist presented a well-attended lecture on the theme of security in a complex world, and referred to the growth potential of the security market, which is already generating sales of USD 280 billion a year and will continue to grow. Fund manager Patrick Kolb was present and provided clients insights into portfolio solutions on the themes of Security and Robotics (*see also the report on robotics investments on page 28*).

Contact

Address
Credit Suisse Asset Management (Switzerland) Ltd.
Kalandergasse 4, 8045 Zurich, Switzerland

E-mail
communication.assetmanagement@credit-suisse.com

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Project management
Gabriele Rosenbusch
Caroline Stössel
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Emerging market investments usually result in higher risks such as political, economic, credit, exchange rate, market liquidity, legal, settlement, market, shareholder and creditor risks. Emerging markets are located in countries that possess one or more of the following characteristics: a certain degree of political instability, relatively unpredictable financial markets and economic growth patterns, a financial market that is still at the development stage or a weak economy.

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