

## *Robotics and Drones*

# Machines that could revolutionize our everyday life.



### UBS Open End PERLES on Solactive Robotics and Drones Total Return Indices

#### I. Machines that could revolutionize our everyday life

Robotic systems support physicians with minimally invasive interventions and unmanned aircraft monitor the irrigation of farmland and protect rhinoceros from extermination by poachers. These are not scenes from a science fiction movie, but situations from our present day. The huge progress of robotics in recent years is making it possible: The McKinsey Global Institute anticipates that the robotics and drone industry can turn our everyday lives upside down in the future and that it has enormous economic potential. According to a study carried out by the Institute in May 2013 ("Disruptive technologies: Advances that will transform life, business, and the global economy") the use of advanced robotics could create value from 2025 amounting to USD 1.7 to 4.5 trillion, USD 800 billion to 2.6 trillion of which in the healthcare sector alone. In addition, robots will be used more in the future in the production and service sector. They will then also influence decisive economic factors, such as work costs, productivity, flexibility and safety. The robotics industry may therefore have a prosperous future ahead of it. Therefore, the industry could also become steadily more interesting to investors.

The reason for the rapid progress is above all the constant further development of the relevant technologies. Robots are becoming more and more efficient due to the improvement in sensors, increased precision and through artificial intelligence. According to McKinsey, they may therefore in future particularly take on more complex and dangerous tasks for human beings.

#### II. Robotics and drones in use – application examples

There are already some relevant examples of this today. Thus, the manufacturer Accuray has developed a robot-controlled radio-surgery system for treating tumors, a demanding task. In future robots will not only be more efficient, but also more adaptable, so that they can support human beings with their work even under adverse conditions. This is demonstrated by the unmanned aircraft used by the company AeroVironment, which work hand in hand with firemen. In thick smoke and darkness they found out exactly where the fire source is and whether there are buildings in the vicinity that pose a particular threat.

Large corporations have already long since recognized the potential and benefits of robotics. Only recently the US retail giant Amazon announced that it wants to have parcels delivered by air drones in a few years' time. DHL made this intention tangible at the beginning of December and delivered medicines with what is known as the DHL parcel copter from a pharmacy in Bonn to the other side of the Rhine in a public test run. The technology giant Google also believes in the future of robotics. In recent months the corporation has bought eight start-ups from this sector. Moreover, Google has already been working on autonomous vehicles since 2010. According to the project team, the fleet of what is known as "Google Cars" had already clocked up more than 800,000 km without any accidents by the end of 2013.

#### SSPA product type

Tracker certificates (1300)

#### Currency: Valor / SIX Symbol

CHF: 24321702 / ROBCH

EUR: 24321703 / ROBEU

USD: 24321701 / ROBUSD

[www.ubs.com/robotics-drones](http://www.ubs.com/robotics-drones)

#### Solactive Robotics and Drones TR Index



As of: April 24, 2015, Source: Bloomberg

Past performance is not indicative of future performance.

#### Investor profile

Solutions for investors with experience in stock market topics and structured products and with a medium to increased risk tolerance who would like to participate in the performance of the equities included in the index at little capital and administrative expense.

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### III. Progress means independence

Progress means independence in the robotics industry. According to McKinsey, robots will in eleven years' time already be capable of producing high-quality goods and noticing and improving errors- not only their own, but also the errors of other robots and human beings.

Despite constant further developments, the acquisition costs for many robots are getting lower and lower, so that gradually they may also be attractive to consumers. One of the first robots to make the transition into private households is the fully automatic vacuum cleaner. The company iRobot has now developed many other household helpers, such as pool and guttering cleaners. At the moment it is not yet possible to estimate conclusively the areas where robots will be actively supporting human beings in their everyday lives by 2025, but there are likely to be many. The economic importance of robots and drones should be correspondingly high in future.

### IV. The product solutions

The UBS Open End PERLES on the Solactive Robotics and Drones Total Return Indices track the performance of the underlying index, which reinvests any net dividends from index members after deducting the management fee of 0.75 percent without limited maturity.

	<b>CHF-Tranche</b>	<b>EUR-Tranche</b>	<b>USD-Tranche</b>
<b>Issuer</b>	UBS AG, London Branch	UBS AG, London Branch	UBS AG, London Branch
<b>SSPA product type</b>	Tracker certificates (1300)	Tracker certificates (1300)	Tracker certificates (1300)
<b>Conversion ratio</b>	1:1	1:1	1:1
<b>Management fee</b>	0.75% p.a.	0.75% p.a.	0.75% p.a.
<b>Expiry</b>	Open End	Open End	Open End
<b>Underlying (Currency)</b>	Solactive Robotics & Drones Total Return Index (CHF)	Solactive Robotics & Drones Total Return Index (EUR)	Solactive Robotics & Drones Total Return Index (USD)
<b>Issue price</b>	CHF 93.38	EUR 94.39	USD 94.87
<b>Listing date</b>	30 May 2014	30 May 2014	30 May 2014
<b>ISIN / SIX Symbol</b>	CH0243217020 / ROBCH	CH0243217038 / ROBEU	CH0243217012 / ROBUS

### V. Transparent index process

Based on the specifications of the index provider Solactive AG, the Solactive Robotics and Drones Total Return Indices target the pioneers in the robotics and drones industry. Only companies that meet several quality standards are included on the shortlist. Every index member needs to demonstrate that a significant share of its business is focused on the robotics and drones sector, or that the company is currently developing its own robotics and drones division with the potential to bring in a major share of overall revenue.

The concept of the indices also takes account of the dynamic environment of this highly innovative business segment, as at present no-one knows what direction the developments of robotics and drones will take and which companies will ultimately dominate. The respective index concept therefore provides for a "fast entry" rule alongside the twice-yearly index adjustments, which take place in March and September: This ensures that stock companies can be incorporated in the index at any time, e.g. immediately after an initial public offering, provided they meet the quality standards.

This also means that the equities of each company have to be listed with an exchange that grants trading access to foreign investors without restrictions. Furthermore, to be included in the index, market capitalization must amount to at least 100 million US dollars and the average daily trading volume for the past three months must amount to at least 600,000 US dollars for reasons of liquidity. When the index is adjusted, all index members are weighted equally, whereas companies with a market capitalization below 1 billion US-Dollar are capped at 5.0%.

## VI. Members of the Solactive Robotics and Drones Total Return Indices

Company	Country	Market capitalization (in USD)	Weighting
CYBERDYNE Inc	Japan	2.81 bn	17.32%
Intuitive Surgical Inc	United States	18.83 bn	15.92%
FANUC Corp	Japan	53.12 bn	15.61%
Cognex Corp	United States	4.14 bn	15.49%
KUKA AG	Germany	2.67 bn	14.99%
Mazor Robotics Ltd	Israel	0.27 bn	5.22%
Accuray Inc	United States	0.73 bn	5.22%
iRobot Corp	United States	1.02 bn	5.22%
Aerovironment Inc	United States	0.61 bn	5.01%

As of: April 24, 2015, Source: Solactive (the current index composition and weighting is published daily on [www.solactive.com](http://www.solactive.com))

## VII. Opportunities

- Equity-linked participation in the growth potentials of the robotics and drones industry.
- Transparent and targeted index structure that can also add new index members at any time ("Fast Entry" rule) in order to react quickly to the development dynamics in the robotics and drones sector.
- The selection of index members from the robotics and drones sector, to which special growth potential can be assigned is carried out by the index provider Solactive AG.
- Diversification within the robotics and drones sector through several equities with a regular index review twice a year.
- Tradable every trading day under normal trading conditions.
- No fixed term restriction.

## VIII. Risks

- No capital protection: investors run the risk of losing their investment if the price of the underlying index worsens.
- The robotics and drones sector is a relatively young economic sector and it is not yet certain whether it will fulfil its expectations and which companies will actually succeed.
- Investors bear the issuer risk and could lose their investment if the issuer files for bankruptcy.
- The issuer intends to ensure liquidity in normal market phases on trading days. However, investors should realize that they may not be able to buy/sell the product at any point in time.
- As the stocks included in the index may be listed in different currencies and the product does not have any currency hedges, the investor may also be exposed to an exchange rate risk, which may adversely affect the value of the product.
- The issuer has the right to terminate the product if certain conditions are met. See the termsheet for details.

## IX. Contact

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