



## The Exponential Age

October 2016

Investing is about the future. We all know that 'past performance is no guarantee of future performance'. But we can learn from the past. If there is one thing I believe we should have learnt above all else from the past, it is "There will be change". So investing by following the past is like driving by watching the rear vision mirror. Not very clever.

If we look at some former great companies, both from New Zealand and overseas, we see that the gutter is full of corpses. I recently heard a wonderful expression of why: "They failed to see the future". Now there is the challenge for investors. Only after the event will we know which investments were best positioned for the future. Was it luck or was it skill? Unless one actively positions one's investment for the future, you will be relying on lady luck.

One presenter at a recent presentation I attended, talked about the growth in Artificial Intelligence. Yes, we all know that computers are taking over our every day. What with smart phones, most people have changed their daily activities. When was the last time you actually wrote out a cheque? But Artificial Intelligence is rapidly taking things to a whole new level. Today there are robots that are actually intuitive. There are today, robots which can operate (i.e. surgery), better than the world's best surgeons in certain areas, and can decipher if they need to change as they work. Who would have thought about surgeons being made redundant by computers? Just what educational degree are you going to advise a young school leaver today? Consider the following:

### Into the future

By Udo Gollub at Messe Berlin, Germany

*"I just went to the Singularity University summit. Here are the key points I gathered.*

*Welcome to the Exponential Age. Software and operating platforms will disrupt most traditional industries in the next 5-10 years.*

**Artificial Intelligence:** *Computers become exponentially better in understanding the world. This year, a computer beat the best Go player in the world, 10 years earlier than expected. In the US, you can get basic legal advice from IBM Watson. With 90% accuracy, compared with 70% accuracy when done by humans. Facebook now has pattern recognition software that can recognize faces better than humans. By 2030, computers will have become 'more intelligent' than humans.*

**Cars:** *In 2018 the first self-driving cars will be offered to the public. Around 2020, the complete industry will start to be disrupted. Imagine, you will call a car on your phone; it will show up at your location and drive you to your destination. You will not need to park it, you only pay for the driven distance and you can be productive whilst driving. It will change the cities, because we will need 90-95% fewer cars for our future needs. We can transform former parking spaces into parks. At present, 1.2 million people die each year in car accidents worldwide. We now have one accident every 100,000 kms. With autonomous driving, that will drop to one accident in 10 million km. That will save a million lives each year.*

*Electric cars will become mainstream around and after 2020. Cities will be cleaner and much less noisy because all cars will run on electricity, which will become much cheaper. Most traditional car companies may become bankrupt by tacking the evolutionary approach and just building better cars; while tech companies (Tesla, Apple, Google) will take the revolutionary approach and build a computer on wheels. I spoke to a lot of engineers from Volkswagen and Audi. They are terrified of Tesla. Insurance companies will have massive trouble, because without accidents, the insurance will become 100 times cheaper. Their car insurance business model will disappear.*

**Real estate** values based on proximities to work-places, schools, etc. will change, because if you can work effectively from anywhere or be productive while you commute, people will move out of cities to live in some more rural surroundings.

**Solar energy production** has been on an exponential curve for 30 years, but only now is having a big impact. Last year, more solar energy was installed worldwide than fossil. The price for solar will drop so much that almost all coal mining companies will be out of business by 2025.

**Health:** The Tricorder X price will be announced this year - a medical device (called the "Tricorder" from Star Trek) that works with your phone, which takes your retina scan, your blood sample and your breath. It then analyses 54 biomarkers that will identify nearly any diseases. It will be cheap, so in a few years, everyone on this planet will have access to world class, low cost, medicine.

**Agriculture:** There will be a \$100 agricultural robot in the future. Farmers in developing countries can then become managers of their fields instead of working in them all day. Aeroponics will need much less water. The first veal produced in a petri dish is now available. It will be cheaper than cow- produced veal in 2018. Right now, 30% of all agricultural surfaces are used for rearing cattle... Imagine if we don't need that space anymore.

**Apps:** There is already an app called "moodies" which can tell the mood you are in. By 2020 there will be apps that can tell by your facial expressions if you are lying. Imagine a political debate where we know whether the participants are telling the truth and when not!

**Longevity:** Right now, the average life span increases by 3 months per year. Four years ago, the life span was 79 years, now it is 80 years. The increase itself is increasing and by 2036, there will be more than a one-year increase per year. So we all might live for a long, long time, probably way beyond 100."

No one can be sure that they know the future, but for investors we believe it is vitally important that you understand the fact that things will change. Looking in the rear-view mirror only works when things go in a straight line and go smoothly. Throw in a few corners, the odd political upheaval and man's amazing ability to develop what seems impossible today, we believe you need active management by proven forward thinking financial managers. The Kodak example is a classic. So was the statement by the CEO of Nokia who said that the iPhone was a niche market .... Oops ...!

At S.AG Private we believe in active management with an emphasis on absolute returns where possible. We want to see our managers actively seek out the next Apple, Samsung or Google. We do not see long term value in assets which might become stranded in the not too distant future.

Please do not hesitate to contact me if you have any queries about any of the above.

Kind Regards,

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