

## VIRTUAL ECONOMY

Networks and digital products that can be used free of charge do not appear in any accounts. Nonetheless, they effect fundamental changes to the economy. Data and historical comparisons must be closely scrutinised.

“We have a new pope” – this was the headline splashed across presentations and publications of every kind. Next to it, two images taken at different times in St. Peter’s Square in Rome. Packed crowds in a style that we can hardly imagine now in the era of Covid-19. At the inauguration of Pope Benedict XVI in April 2005, only the backs of heads can be seen; eight years later, at the inauguration of Pope Francis in 2013, a glowing field of mobile phones floats above the heads. It is a symbolic image of the rapid expansion of the digital world.

If you wanted to preserve the memory of such an event in pre-digital times, you had to have your negatives developed into photos, or purchase a ready-made picture at the kiosk around the corner. The prices involved in these transactions would be entered into the kiosk’s income statement and thus into the national accounts for determining gross domestic product. Things are different in the digitalised world. Millions and billions of images and videos are taken, stored, viewed, sent, commented upon, forwarded, without any price ever being paid – at least not directly. And none of this features in any income statement or

national account. Yet it is not only the value of these images that is partially absent from the statistics of the digitalised age. The same is true for the value of using search engines, GPS systems or apps such as Uber, Airbnb and Facebook. Some of these services do generate revenues directly or indirectly via advertising, sales of user data or taxi and hotel services. In most cases, though, their use is free of charge, at least superficially, and does not appear in any accounts.

Corporate income statements and national accounts are highly relevant for all types of decisions – from a private investment decision to state budgets and central-bank monetary policy. Is it possible that in an age of data overload and a mania for calculability, we systematically juggle numbers that no longer adequately reflect reality?

### From the tangible to the intangible world

Not so long ago, companies and national economies computed their value creation based on tangible things: factories, machinery, raw materials, land, properties, paid labour. The asset side of a company’s balance sheet consisted largely of tangible assets; physical goods were sold at markets, department stores or trade fairs. Services were bought and sold between individuals, whether at the bank or the barbershop. Assigning a valuation to a company was relatively easy in such an economy dominated by material goods. The total economic value added, the gross domestic product, could be calculated quite reliably, despite the fact that major factors such as



unpaid work in the household or undeclared work, which is widespread in many countries, were not recorded even then.

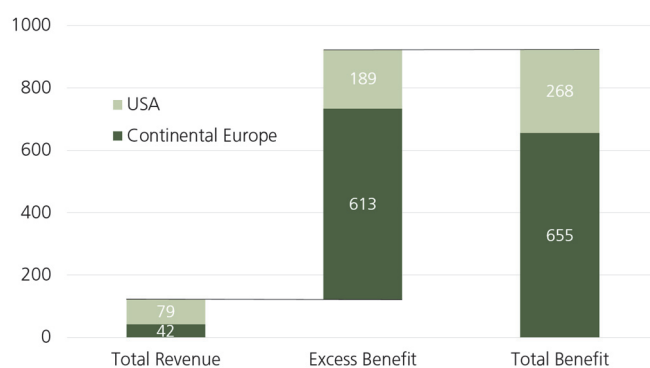
In today's digitalised world, an increasing share of corporate value derives from intangible assets such as software, algorithms, data, networks, intellectual property, brands, patents and the like. This makes a valuation not only more complex, but also less reliable, especially since network effects are very difficult to quantify.

1,200 billion for Google's parent Alphabet no longer seems as exaggerated as some might think.

In economic terms, the excess benefit calculated in this way is the so-called consumer surplus. Such consumer surpluses have always existed and not just since the introduction of free digital products – they are no substitute for income statements. However, it seems reasonable to assume that excess benefits have risen sharply with digitalisation. Furthermore, the sheer size of these figures suggests that valuations for companies in the digital economy, which many consider enormously high, may have some justification after all: investors expect that companies will increasingly understand how to convert their virtual products into hard cash. And it does not take much imagination to assume that the aggregated figures for the increasingly digitalised economy, which are also accumulated over years, must add up to a multiple of the figures reported today for gross domestic product.

GOOGLE'S UTILITY VALUE IN BILLION USD

## BENEFIT FAR EXCEEDS REVENUE



Source: NZZ, 11 March 2021, p. 20. The data have only been calculated for Continental Europe and the USA. For details see the NZZ article "The Hidden Value of Google and Facebook" by Matthias Benz (German only).

How do we register the value of digital products that can be used free of charge? As recently described in the *Neue Zürcher Zeitung* (NZZ), science has developed methods to find the value of such services. Thus, it seems plausible that the use of Google is worth around USD 1,000 per year to the average consumer in Europe and the USA. We can multiply this by the number of users to find the total benefit of digital products for consumers. As our chart illustrates, revenue – for Google, this comprises mainly sales of advertising – is many times lower. The USD 802 billion in excess of revenue does not appear in any accounts. The excess benefit for Google is thus an entire 2.7 percent of GDP for Continental Europe, and 0.9 percent for the USA, per year. With figures like these, a market capitalisation of around USD

## Yesterday's bubbles

Gross domestic product is one of the most often-used key figures in economics. It indicates whether an economy is contracting or expanding; it is used as an indicator for wealth at the national and per capita levels; it is a reference for the sustainability of public and private debt or, in monetary policy discussions, for estimating the size of money supplies and central-bank balance sheets. In addition, investors are familiar with the "Buffett indicator", a rule of thumb from the American market guru Warren Buffett. According to this ratio, the market capitalisation of all companies now actively traded on the US stock exchanges currently amounts to 194 percent of US gross domestic product. This, as the chart on the next page highlights, is a historical high and reason enough for many augurs to diagnose a bubble with imminent risk of a crash.

Naturally it is not quite as simple as that, especially if we consider the above-mentioned enormous changes that have taken place over the last 15 years. For example, there is some evidence



that the level of GDP is increasingly underestimated in a digitalised economy. So it is quite possible that although the "Buffett indicator" was an accurate predictor of market bubbles in the pre-digital economy, its diagnostic power is no longer what it was – and that an accumulation of measurement problems means it will continue to diminish. The same may be true for every other application of GDP.

US MARKET CAPITALISATION AS PERCENT OF GDP, 1990–2021

### A BUBBLE – OR NOT?



Source: Bloomberg, market capitalisation for the "Buffett indicator" is calculated based on the Wilshire 5000 index.

Criticism of the gross domestic product stretches back as far as the indicator itself. As long ago as 1968, US presidential candidate Robert F. Kennedy scoffed that GDP measured "everything except that which makes life worthwhile". For many years there have been attempts to replace GDP with alternative indicators, but to date none has succeeded. The great strength of GDP is that it is based on actual prices paid in the market, so it is hard to beat in terms of clarity and comprehensibility. Hence despite the increasingly challenging problems with measurement, the indicator is unlikely to disappear. But anyone who works with this and similar indicators should be aware that in addition to the recognised weaknesses, new ones are emerging.

### Coordinate system in upheaval

Before the advent of digitalisation, there were fewer and certainly also "cruder" figures for analysing companies and economies. At the same time, the world was less complex and the numbers arguably more reliable. But even then, it was not enough to simply make decisions mechanically on the basis of key figures and their historical development. Contextual knowledge was necessary, be it about accounting methods and calculation standards or specifics of the countries, industries and companies.

It may seem paradoxical, but today financial ratios in general should be approached with even more caution than in pre-digital times. If the book value of a company consists essentially of intangible, hardly quantifiable assets, then the price-to-book ratio is also less useful. Further, the price-earnings ratio of Apple, Google or Facebook may rightly be higher than that of companies in more traditional market sectors. Conventional key figures are of course still valid, but superficially impressive historical comparisons are not always meaningful. Or in other words, the coordinate system of the economy is not out of service, but it is experiencing a fundamental upheaval. This includes the long period of historically low interest rates, the origins and dangers of which are still virtually impossible to assess.

The spread of the virtual economy is a tremendous opportunity for the global society and its businesses. At the same time, digitalisation is no panacea for every problem, despite the quasi-religious character it is acquiring. After all, algorithms, digital networks and data are anything but infallible. Under these circumstances, investors must on the one hand be invested in the digitalised economy and use its tools, especially in the field of data processing. On the other hand, the quality of figures, business models and analytical methods must be scrutinised even more carefully and with a sober head.

—  
IA, 31.03.2021



## SPACs: CATCHING FLIES WITH HONEY AND VINEGAR

An ostensibly new financial vehicle is now causing a stir in investor circles. They say that it can generate rates of return in the triple digits. What is it? A Special Purpose Acquisition Company (SPAC) is a company with no commercial operations that is formed with the sole purpose of raising capital through an IPO in order to acquire an existing business. SPACs, also known as "blank check companies", have existed in the USA for decades. In recent years, however, this business has experienced a veritable boom.

Any increase in efficiency in the capital market is welcome. With SPACs, however, the danger lies in buying a pig in a poke and then being taken to the cleaners by rascals.

The first step for a SPAC is to found a shell corporation and organise a road show for major investors. Next, the shell company is listed on a stock exchange. With the capital thus acquired, the management of the shell company then searches for suitable target companies. The management typically has two years to identify acquisitions. Once a target company has been found and the management of the shell company has been able to negotiate a deal with the company to be acquired, a vote is held at the shell company. The moniker "blank check company" is not exactly correct insofar as the shareholders vote on whether the target selected by management should be acquired or not. Those opposed have the right to withdraw and their investment stake is returned. If there is no acquisition, the investors get their money back. The sponsor, or the management of the shell company, usually receives about 20 percent of the shares in the target company as compensation. These funds cover the costs of the IPO, set-up,

listing and review of potential target companies. However, the sponsors only make money if an acquisition takes place. For this reason, they may be tempted to agree to a deal that is not advantageous for other investors.

SPACs are considered a far less regulated road to a stock market listing than a typical IPO. In the USA, the SEC review required for a traditional IPO may last up to six months, while such a review for a SPAC typically lasts about two months. The trend toward more SPACs had already been heating up in the years before corona. With the onset of the crisis, however, this has become even more pronounced. Many companies were sceptical about an IPO due to market volatility and therefore opted for the route via a SPAC. This offers companies greater certainty in pricing.

What to think of SPACs? Firstly, any increase in efficiency in the capital market is welcome. After all, it allows companies to obtain capital more easily, i.e. at lower cost. For the investor, it offers a number of additional investment opportunities, and the investment banks, those intermediaries who primarily profit from traditional IPOs, cannot immediately pocket the entire added value of the IPO for themselves. On the other hand, the "sponsors" get to grab a big slice, which is not wrong, since they also do the work. Or most of it.

With SPACs, the danger is that the *praenum-rando* provision of capital leads to buying a pig in a poke and then being taken to the cleaners by rascals. At present, many SPACs are attempting to raise their profiles with promotion by celebrities, whose involvement may not be substantial. Be on your guard. Reality is more important than appearances, especially here. Otherwise, there is a risk of what we have already seen with SPVs from the time before the financial crisis: an accident waiting to happen.

—

KH, 31.03.2021

