



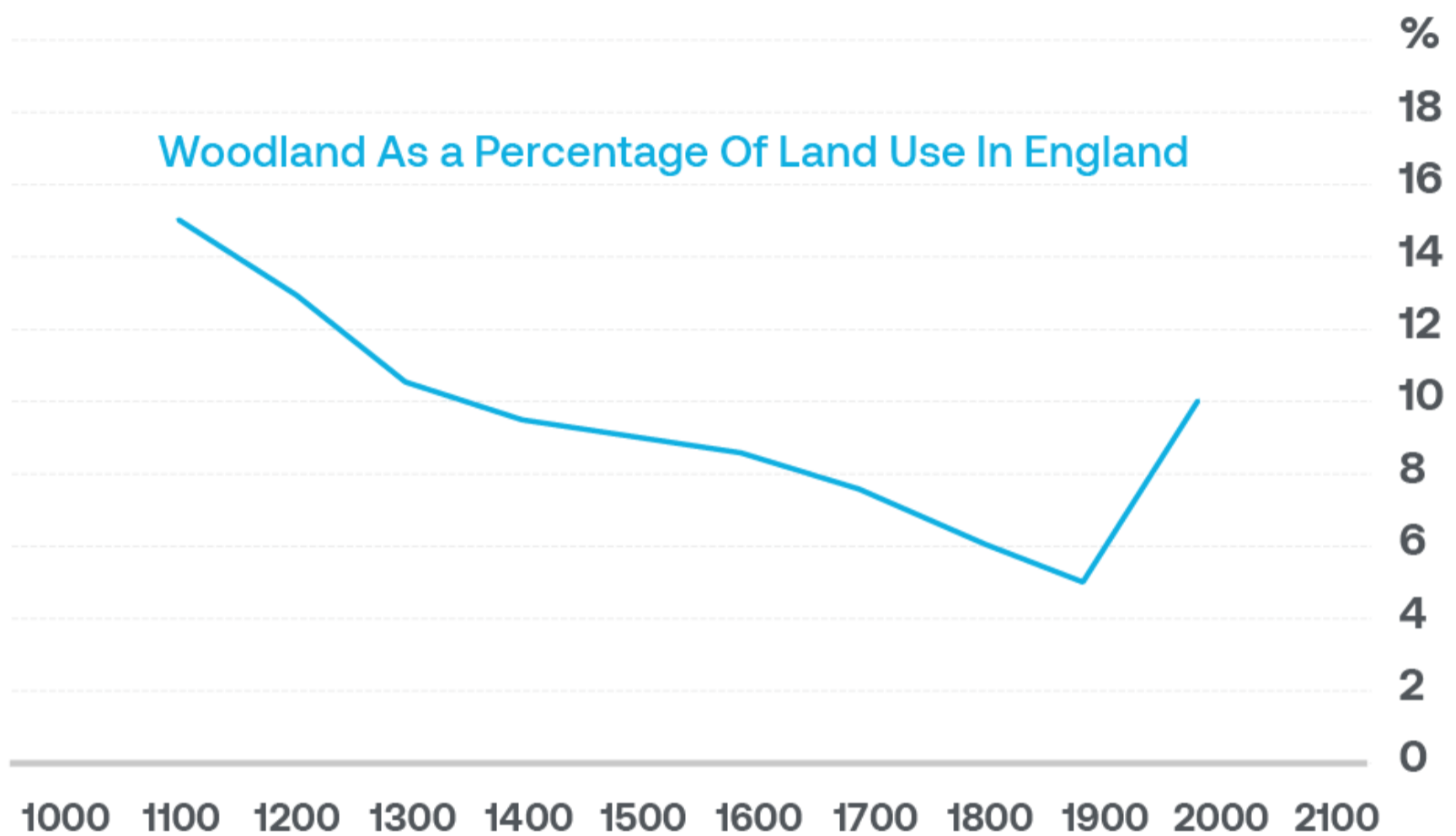
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# Scarcity & Innovation: Europe's Answer to a Crisis

One of the most repeated lessons from this history is that scarcity leads to innovation. Incidentally, the corollary to this principle is that hubris leads to downfall – just ask Putin how his ill-advised and ill-planned invasion of Ukraine is going. Another important teaching is that political and macroeconomic systems are very complex. And people tend to focus only on the first order effects of policy and decision-making. But it is usually the second, and even third, order effects that are most important and least accounted for, the ones least priced-in by markets.

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# Scarcity in England: England's timber was disappearing before the onset of the Industrial Revolution



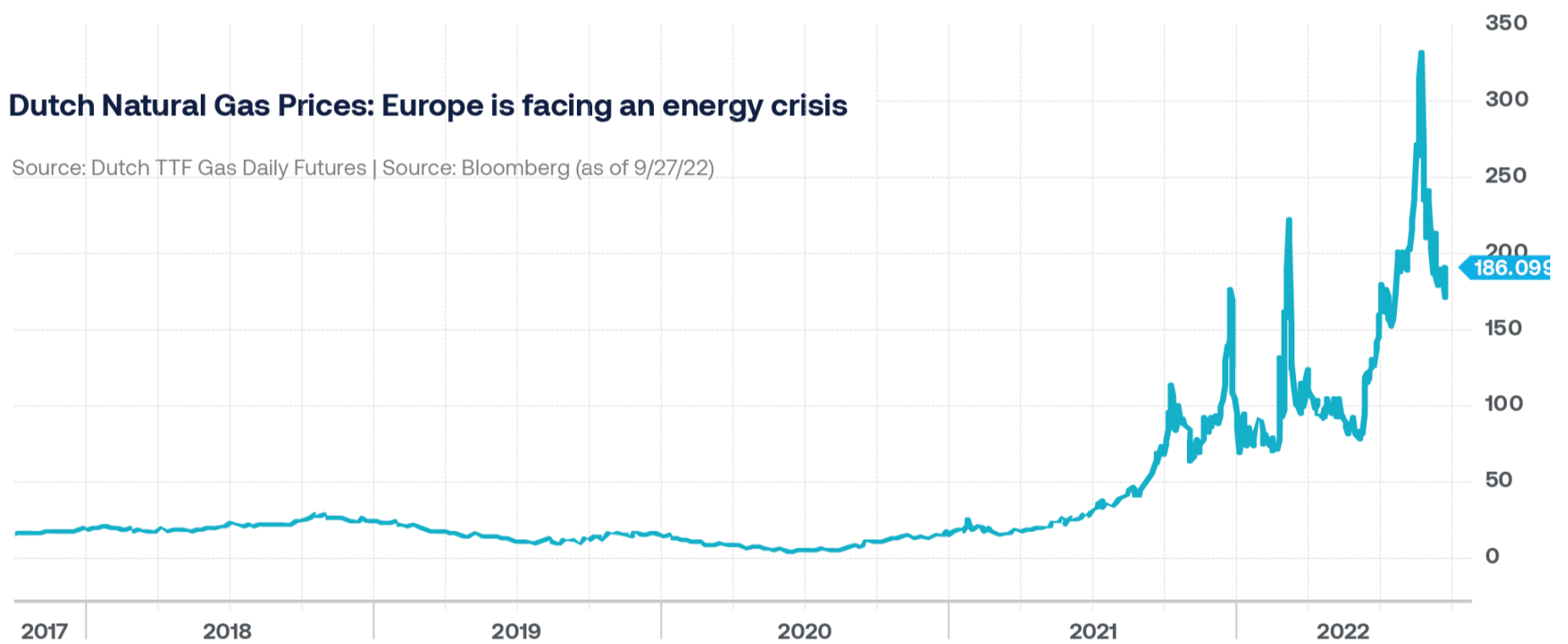
Source: Forestry Commission, 2001. National Inventory of Woodland and Trees. National Forest Inventory (2011); Clocktower

With these ideas in tow, let us take a closer look at the Industrial Revolution, one of the seminal transformative events in history. It is accurate to assert that this period was as important to humanity as the adoption of agriculture in terms of progress. So, we all know very well that the Industrial Revolution began in England during the late 18th and early 19th century. But why did it begin there and not, say, in Spain or France that had similar technological advancement? And why during that time period? Well, as promised, this thousand-year chart offers some clues. As it shows us, woodland as a percentage of land use fell continuously in England from about 1100 AD to right before the commencement of the Industrial Revolution. By deforesting their own island, the English were running out trees. And trees were very important back then because they were the main source of fuel. England, we have a problem. In response, the English began importing trees from the Baltic regions, where there was a surplus of timber. But this trade was regularly interrupted by the Danes and the Swedes. This meant that the English were constantly dealing with a major problem for any economy – fuel scarcity. Well, this energy crisis – scarcity – led to innovation: the English were the first to experiment with coal as a source of energy. Necessity is the mother of invention. It turns out

that coal is a more efficient as a source of energy than timber – 26K BTUs per ton for coal versus 14K BTUs per ton for wood. Because of innovation born out of necessity, the English went from a state of a permanent energy crisis to one of energy abundance much sooner than any other place. One other feature of coal is that it is much heavier than timber. This means that the English also had to develop canals and other transportation systems that could move the coal from where it was dug up to where it could be transformed into usable fuel. Scarcity led to innovation which led to the Industrial Revolution which led to the British Empire dominating the world for over a century.

So, let us return to the present and long-term forecasting. Who could be the big winner of the next decade? No one today would say Europe. Everyone is short the Euro, short European Industrial Stocks, etc. If you have a six-month time horizon, if you are a trader, a short-term investor, then that is the probably the appropriate risk stance.

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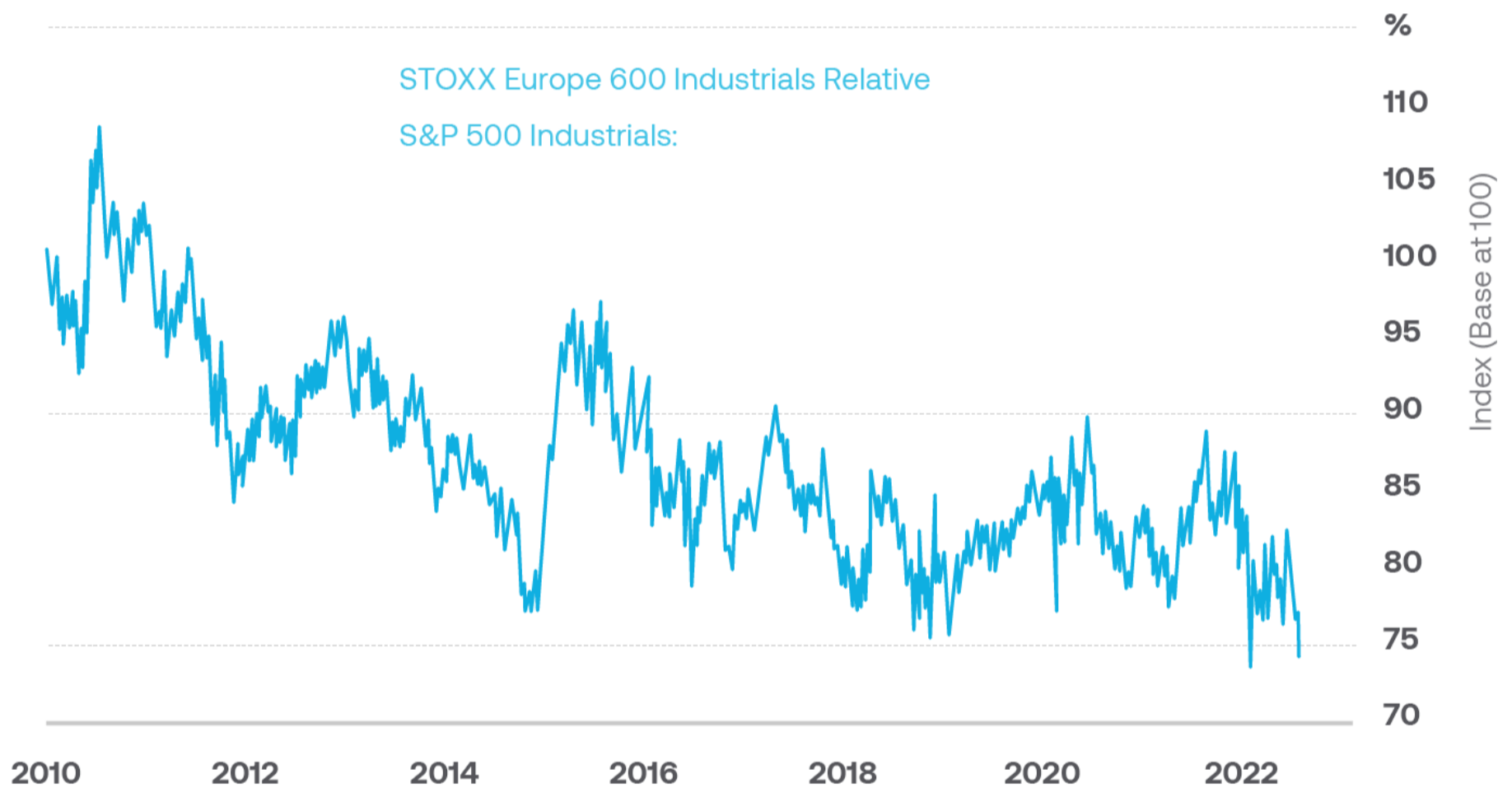
This chart shows Dutch natural gas from the generic futures contract prices. Since 2021, they have skyrocketed, punctuated with dramatic upward shifts every time Russia makes a major move or threatens another escalation. Europe is in the throes of a major energy crisis – largely of its own making, by the way. But if you are long-term investor, is that the appropriate stance? I would say no. Let me explain why.

Despite the fact that over the past decade European industrial companies pay a 30% to 50% premium for electricity use over their American counterparts (that cost premium today is close to 100%), their export share of global exports has remained largely in line over that same time period. That means that over the past decade, American companies have wasted their electricity cost advantage versus their European competitors by not taking market share from them. Another way to state is that higher European energy

input costs have not decreased their competitiveness. Moreover, as the US exports more liquified natural gas to Europe and uses less for domestic consumption due to higher prices abroad, European and American liquified natural gas prices will converge – European gas prices will fall, and US prices will rise. This should reduce the energy advantage that US companies currently enjoy over their European counterparts. Finally, Europe leads the world in renewable energy use. 30% of European energy consumption comes from renewables versus 19% for the US and 18% for the world.

It will probably continue to innovate on renewable energy precisely because of its energy scarcity problem. It has to, it's a matter of survival. Think about it, where is the next big breakthrough in energy likely to come from? A place where energy is abundant and cheap like the US or the Middle East? Or a place where it is scarce and expensive like Europe? Again, necessity is the mother of invention.

## European Industrials vs. American Industrials



Source: Macrobond, rebased to 100 at 1/1/10

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My bet would be that it is in Europe where that breakthrough will materialize. Remember the medieval English and their problem of energy security.

As a long-term investor, how do you deploy this trade? You buy the European Industrial sector. This graph shows you the performance of European industrial companies versus their American counterparts. As you can observe, American industrial stocks have greatly outperformed over the past 12 years. The smart bet is that this trend will not continue. Either because European electricity costs will come down as the US exports more natural gas to Europe, or because Europe innovates faster and better, or both that trend should reverse. The only way this trend does not reverse is if Europe does not innovate its way out of its scarcity problem. That is a bet that goes against the grain of human history. It is not one anyone should make. For long-term investors, European industrial companies are a good bet.

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#### Ahmed Riesgo – Insigneo’s Chief Investment Officer

Mr. Riesgo oversees all the company’s research and investment functions. This includes investment strategy, devising and implementing the firm’s global market views and asset allocation, communicating them to its clients and the public, and managing the firm’s model portfolios. In addition, he is the Chairman of the Insigneo Investment Committee.