

Belleview Report 2017-09-29

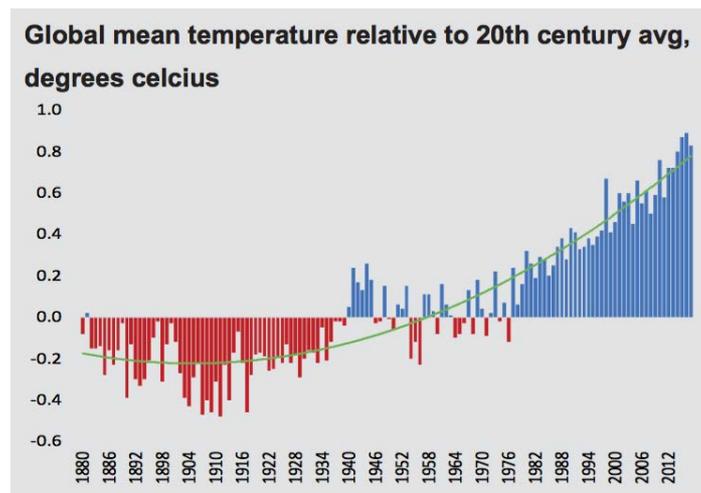
How To Invest In Extreme Weather?



The news headlines on massively damaging hurricanes, floods and heat waves are getting frequent. Extreme weather is now the norm. The impact of extreme weather on logistics, infrastructure and the wider economy has never been more concerning.

The cause

The most probable cause of the rise in extreme weather is global warming, which in turn has been caused by increased and accelerating greenhouse gas emissions from human activity. The body of scientific evidence suggests that this is the main cause.



Source: NOAA, Independent Strategy

Now, global average temperatures are shooting up again and are already more than one degree centigrade higher than during pre-industrial times (see chart above). In southern Alaska, which has in places lost a vertical kilometre of ice cover, the reduced load on the

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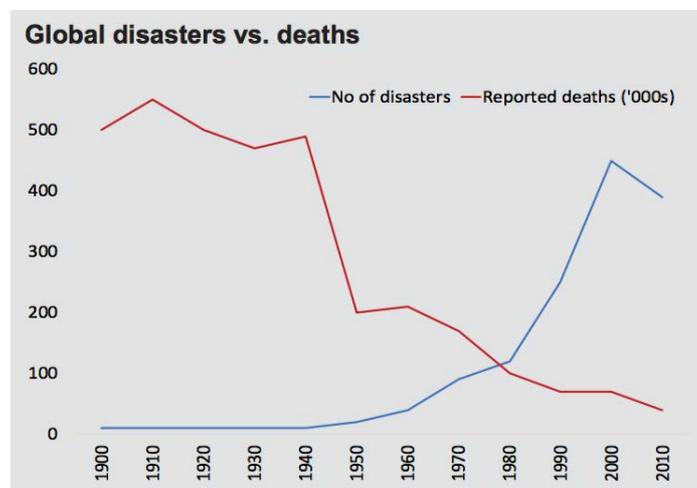
crust is already increasing the level of seismic activity. In high mountain ranges across the world, longer and more intense heat waves are melting the ice and thawing the permafrost that keeps mountain faces intact, leading to a rise in major landslides. There is clear evidence that extreme weather in the form of floods, drought and hurricanes is rising.

How bad is the damage?

Since 1970, the number of such disasters worldwide has more than quadrupled to around 400 a year. Globally, there were 327 disaster events in 2016, of which 191 were natural catastrophes and 136 were man-made.

The damage from extreme weather is immediately felt with infrastructure, logistics and power. In total, the disasters resulted in economic losses of \$175 billion in 2016, almost double the level in 2015.

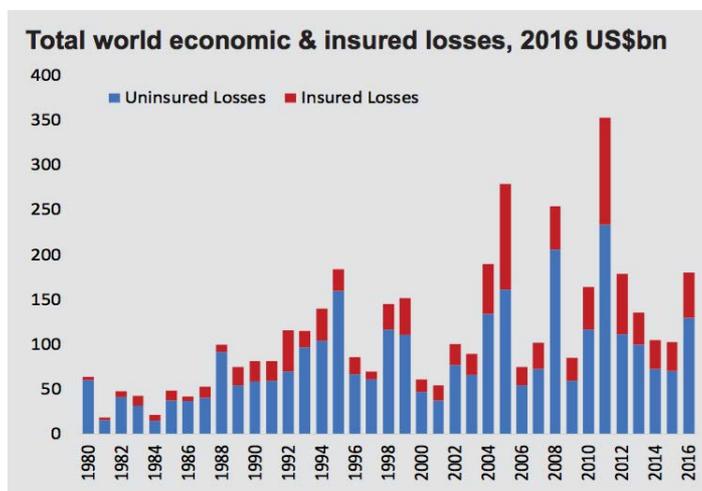
In 1970, 200,000 people perished annually (see chart below). Nevertheless, worldwide, around 11,000 people lost their lives or went missing in disasters in 2016. Surprisingly, although the number of disasters keeps rising, fewer people are dying as a result of them, thanks to safety measures such as improved buildings and flood prevention schemes.



Source: CRED EM-DAT, Independent Strategy

An analysis by a coalition of the world's biggest insurers, concluded that the "protection gap" – the difference between the costs of natural disasters and the amount insured – has quadrupled since the 1980s. **On average only about 30% of catastrophe losses have been covered by insurance over the last ten years. That means that about 70% of catastrophe losses – or \$1.3 trillion – have been borne by individuals, firms and governments. And the gap is widening (see chart below).**

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Source: Cat Perils & Swiss Re Institute

How can these potential losses be funded?

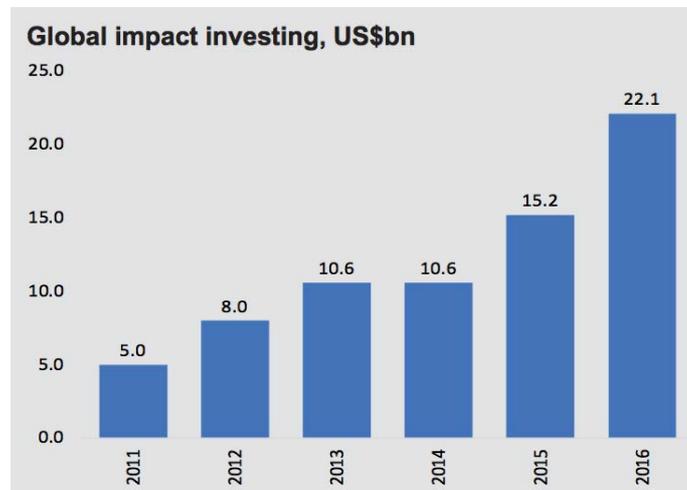
1) Cat bonds

Insurance companies now issue “[catastrophe bonds](#)”, also known as cat bonds. These are risk-linked securities that transfer a specified set of risks from a sponsor to investors. They were created and first used in the mid-1990s in the aftermath of Hurricane Andrew and the Northridge earthquake. Since the Katrina event, *the “cat bond” market, although still relatively niche, has quadrupled in size and a secondary market has now become more liquid.*

2) Impact bonds

Another funding solution is the use of “[impact bonds](#)”, or payment by results. Impact bonds are becoming increasingly common in the field of social finance. They are mechanisms through which private investors fund a project intended to improve the social outcomes of a publicly funded service, such as literacy or health, and receive returns based on the results achieved. *Last year impact investments globally reached \$22 billion, growing at nearly 30% a year (see chart below). McKinsey found that returns on such investments in India averaged over 10% with most surpassing a market target of 7% – so profitable exits could be achieved in social enterprise investment.*

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Source: JP Morgan, GIIN

3) Green bonds

[Green bonds](#) were created to fund projects that have positive environmental and/or climate benefits. The majority of the green bonds issued are [green “use of proceeds” or asset-linked bonds](#). Several cities – including Johannesburg, Gothenburg, Spokane and Tacoma – have already issued green bonds. New York is planning to invest over \$27 billion in green infrastructure. It can only be a matter of time before municipalities or other local governments issue bonds specifically to finance resilience projects.

3 ways to invest in extreme weather

1) Insurance sector

Insuring against catastrophes is set to increase substantially as a business and opens up opportunities for investors. *The irony is that catastrophes destroy capital and that reduces spare capacity in the insurance sector, increasing insurance companies’ pricing power. Insurance as a sector becomes more profitable.* Buying the sector is the simplest investment strategy.

2) Infrastructure sector

The Global Sustainability Institute [estimates](#) that, within 20 years, \$200 billion of investment globally will be needed annually to combat losses from climate impacts.

Infrastructure projects play a major role in increasing resilience. For instance, flood resilience can be enhanced through defences – barriers and dykes to prevent floodwater reaching particular areas – and resilience to drought through the building of reservoirs. If the main cause of increased extreme weather is man-made carbon and other gas emissions, then action on emissions is also necessary.

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Key technologies will be CCS (carbon capture and sequestration), water control (e.g. abatement technologies such as dams, barrages, floating housing stock etc) and water treatment (sewage, desalinisation etc).

All are areas where German, Swiss, French and Dutch engineering firms (like [Suez](#) and [RWE](#)) are global winners along with US companies like [GE](#). Chinese wastewater treatment companies are also beneficiaries.

3) Renewables sector

Nuclear power as an alternative source of energy that does not emit greenhouse gases is controversial and has its own problems (set-up costs, nuclear leakage and waste). But it is set to expand globally and French and Japanese companies are global winners.

Study after study has shown that 100% renewables energy can now be achieved at a manageable cost, as the price of solar panels and windmills keeps plummeting and efficiency rising. The real investment opportunity would be increasingly in renewables.

Conclusion

Crises provide opportunities. *Catastrophe or impact bonds will be a growing market where price volatility will provide opportunities for investors. Green bonds to fund resilience infrastructure could deliver high returns to compensate for higher risk. And investment in infrastructure and renewable energy to prevent an acceleration of extreme weather caused by global warming should be increasingly profitable.*

Independent Strategy