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FUND SELECTION AND FIGHTER PLANES

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Of all the heroes of World War II, Abraham Wald is probably one of the least known. His anonymity shouldn't be surprising, though: being a statistician, his role lacks the necessary glamour to be made into a movie. Nonetheless, his story deserves to be more widely known.

During WWII there was a process of analysing planes that had returned from combat, making careful study of the heavily damaged parts and then reinforcing them. These planes showed a consistent pattern of damage, with the wings and the tail sections taking far greater damage than did the fuselage. Reinforce those, went the assumption, and the planes would better survive hits.

Though logical, this insight was – as Abraham realised – completely wrong. The planes that were being examined were the ones that made it back safely. But these were exactly the wrong planes to look at, as the only information they yielded was where a plane could take a hit and still make it back. It was, instead, the planes that didn't return that needed to be studied. And these planes showed a completely different pattern, with damage around the fuselage, the engine and the cockpit.

Such a mistake of correctly interpreting ('reinforce damaged parts') from the wrong sample ('planes that made it'), is known in behavioural economics as survivorship bias. And while they know about this bias, investors keep making it for the same reason that the military almost did in WWII: Some information is easier to gain than other information, leading to the risk of making the right decision based on the wrong information.

For instance, if you're looking for an active Japanese equity fund, you might assess the available funds according to typical success metrics (such as excess return) of the last few years. However, this could lead you into the survivorship bias trap. Why? In the past, Japan has had a monetary policy that deliberately weakened the yen, a process that in turn boosted export companies at the expense of domestic companies. If you therefore looked at the sample of active funds during this period, the top-performing active funds would often be funds that focused on the exporters at the expense of domestic companies.

However, this sample of top-performing Japanese equity managers is probably the wrong sample from which to select. Japan now has a policy focused on domestic corporate reform and not on weakening the yen. As a result, investors should – paradoxically – instead seek out funds that have not done as well during the period of a weaker yen: active funds that focused on the impacts of the domestic reform, rather than on exporters (just as the military paradoxically needed to focus on the parts that weren't damaged on the planes, not the parts that were).

Next time you're selecting a fund, Japanese equity or otherwise, remember the story of Abraham Wald and the damaged planes of WWII. It is important to spend as much time understanding the specific sample you are assessing as selecting the funds from that sample. Don't, in short, make the right deductions using the wrong sample: more reinforced wings would have done nothing to help those pilots that crashed across Europe and never returned.

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