You may already trust algorithms, or mathematical formulas that reduce the need for human judgment, more than you realize. Commercial airliners fly largely, and safely, on autopilot; Netflix Inc. and Amazon.com Inc. recommend purchases that can seem uncannily attuned to your tastes. Why not let computers pick all your investments, too?

Here are a few things to bear in mind.

First, the early quant gets the worm.
Robert Jones, who founded Goldman System Two Advisors LP, an investment firm in Summit, N.J. “Fewer people were doing quant in the 1980s and 1990s,” he says, “so it was fairly easy to add value.”

In those days, Mr. Jones recalls, a computer model that picked stocks on which analysts were revising estimates of earnings upward could beat the market by 3 percentage points or more a year. “But as quant got bigger and bigger,” he says, “the returns to quant have gotten smaller and smaller.”

A group of researchers led by Campbell Harvey, a finance professor at Duke University, recently studied hedge-fund performance, after fees and adjusted for risk. From 1996 to 2014, systematic funds (which describe themselves with such words as “algorithmic,” “computer-driven” or “statistical”) performed about the same as traditional “discretionary” funds that claim to use human judgment to pick holdings.

Furthermore, Prof. Harvey says, funds that aren’t primarily quantitative are pretending they are as a way of attracting investors.

Perhaps it is cheaper to learn from the quants than to hire them.

Take a hint from hedge-fund manager Magnetar Capital LLC, which is seeking to “take what was in our head and our database and make rules out of it”—
measuring intuitions, testing them for reliability and then basing decisions on them.

Information can match the accuracy of earnings forecasts by the investment bank’s analysts.

Those analysts “are quite good, and we haven’t beaten them yet,” says David Jessop, global head of quantitative research at UBS. “If we talk to the analyst and ask, ‘Which variables do you think are best?’ and try to capture that in the model, that could improve the performance of our forecasts.”

Such an approach could benefit any investor.

Human judgment is inconsistent. People are good at knowing what matters, but not very good at always looking at it the same way.

Presented with identical information under different circumstances, we come to different conclusions about it. The judgments of everyone from accountants to physicians and weather forecasters will vary depending on such factors as mood, time of day and how many other demands they have on their attention.

Decades ago, the psychologist Lewis Goldberg showed that if you determine which factors experts consider most important in coming to a conclusion, you can program a computer to size up a decision based on those—and only those—factors. The computer’s predictions using the experts’ criteria turned out to be more accurate than the experts’ own predictions, because the computer always interprets the same evidence the same way.

Another study gave a computer the economic, industry and company variables that analysts said they used to estimate the future returns on a set of stocks. Using the same information, the computer predicted those future returns more accurately than the analysts.

Although Wall Street’s quants tend to rely on complicated algorithms, simple models may suffice. Research has shown that as few as a handful of variables can be enough to base predictions on.
If, for instance, you seem to have a knack for picking small stocks, first measure your returns against those of an index fund that holds most of the same worked for you. Then score each prospective company on those criteria (on a scale of, say, 0 to 5) and pick those with the highest total score.

That approach will couple your human judgment about what works with a computer-like discipline of applying it.

If, instead, you are considering investing in a fund, apply the simplest possible quantitative tests.

First, ask whether the approach can be replicated with one or more market-tracking index funds at much lower cost.

Then look at the long-term return that the quant fund claims its strategy would have earned in excess of the index it compares itself with. (Such returns are often reported over periods before the fund even existed.) From those return claims, subtract the fund’s average annual expenses and another 1% a year to cover its trading costs, which aren’t always included in hypothetical past returns. Is the remaining extra return likely to be large enough in the future to be worth pursuing?

Finally, ask a representative of the fund how many strategies the firm tested before it settled on this one. If the person doesn’t know or won’t say, put your money elsewhere.

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