Act I

A Green Pig Down Wall Street

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October 2009

Once upon a time, not so long ago, there was a bear named Winnie-the-Bear who lived in the Trillion Acre Wood. On some level, he was a silly old bear. Nevertheless, he was wondering what the fuss about hedge funds was all about. He invited his two best friends, George Jones, the famous hedge fund manager, and Ben Put, the famous academic central banker, to the Trillion Acre Wood for a chat on hedge funds.

Winnie-the-Bear	Thank you for joining me for a new adventure. The financial crisis was a major disaster. Didn't anyone see it coming?
George Jones	Very few did. The financial meltdown was a so-called Green Pig event. These things are impossible or at least very difficult to predict.
Winnie-the-Bear	What's a Green Pig event?
George Jones	It's financial jargon for an event that is highly improbable *to occur* but has a major impact on everyone if it actually *does occur*. It's from a famous book called *The Green Pig – The improbable impact of the randomly fooled.*
Winnie-the-Bear	Why call it *green pig*?
George Jones	All pigs are pink. But you can never be sure if *all* pigs are pink. If you thought all pigs are pink, the discovery of a green pig surely comes as quite a surprise, doesn't it?

Ben Put	George is referring to the problem of induction which is the philosophical question of whether inductive reasoning leads to truth. As David Hume put it: *No amount of observations of pink pigs can allow the inference that all pigs are pink, but the observation of a single green pig is sufficient to refute that conclusion.*
George Jones	I'm sure that was helpful. I'll give you an example Winnie: Approximately 65 million years ago an asteroid hit Earth and wiped out the dinosaurs. That asteroid was a Green Pig event. It doesn't happen often and the impact was severe as it resulted in mass extinction. The dinosaurs were the masters of the universe of their time and didn't see it coming.
Winnie-the-Bear	Dinosaurs, masters of the universe, Green Pig event, mass extinction, limited foresight… Sounds like *investment banking*.
George Jones	The parallel is striking, is it not? The analogy has its limitations though. The banks were saved, the dinosaurs not.
Winnie-the-Bear	Someone was talking to me about *chaos theory* in relation to the financial crises. They were referring to some sort of *butterfly effect* where the flatulence of a butterfly in Brazil can set off a Tornado in Texas. I'm not sure I got that right.
Ben Put	The butterfly effect refers to the notion of sensitive dependence on initial conditions, suggesting that small variations of the initial condition of a dynamic system may produce large variations in the long-term behavior of the system.
Winnie-the-Bear	George?
George Jones	What Ben is trying to say is that big events can have small beginnings. These small beginnings can be as trivial as a butterfly's food intolerance. One small trivial event can cause another event to occur that would otherwise not have happened. This second event then causes a third event that would otherwise not have occurred, which then causes a forth, and so on. The initial event is too trivial to be predicted in advance.
Winnie-the-Bear	I understand. The big event in the end is caused by some sort of *ripple effect*.

George Jones	Exactly. The butterfly's wind obviously is not the *direct* cause of something as powerful as a Tornado. It is the *indirect* cause of the Tornado. Think of the *domino effect*. The first domino stone to fall is and is not *causing* the last one to fall. The first stone does not touch the last stone directly but triggers a series of events—the ripple effect—that eventually causes the second last stone to bring down the last stone.
Ben Put	The system of dominos is deterministic, not chaotic. The outcome is a combination of the first triggering action—a crepitating butterfly in your terminology Winnie—*and* the configuration of the system.
Winnie-the-Bear	This is getting too complicated. Why don't we just call the financial crisis an accident and be done with it? Accidents happen.
Ben Put	Accidents do not just happen. In complex systems, large accidents, though rare, are both inevitable and normal. These accidents are a characteristic of the system itself.
Winnie-the-Bear	George?
George Jones	What Ben is trying to say is that the coffeemaker or entertainment system of a commercial aircraft is not supposed to bring down the plane, but both have done so in the past. An airliner is a perfect example of what Ben calls a *complex system*: a large mass containing explosive fuel, flying at high speeds and operating along a fine boundary between stability and instability. Small forces can upset the system, causing a chain of events that results in the destructive release of the large amount of energy stored in the system. Interestingly, sometimes efforts to make those systems safer can make the systems more complex and therefore more prone to accidents. It does not take too much imagination to adapt this analogy to the world of finance, does it?
Winnie-the-Bear	No it doesn't.
George Jones	Lord Bauer brought it to the point: *A safe investment is an investment whose dangers are not at that moment apparent.*
Winnie-the-Bear	Didn't know Jack Bauer got knighted; thought he was a fictional character. But then, why am I not surprised?

George Jones	It's *Peter Thomas* Bauer as in economic adviser to Margaret Thatcher. It's a good quote. Just because you believe all pigs are pink doesn't really mean that you won't—one day—discover that they are not.
Winnie-the-Bear	Got that. *Not to be absolutely certain is, I think, one of the essential things in rationality.* I think we can even go further by arguing that *the only constant is change, continuing change, inevitable change, that is the dominant factor in society today.*
George Jones	Absolutely. We can take it even further; in the end all things fail: strategies, empires, species, monetary systems, solar systems, life, the universe, etc. A long period of no accidents can lead to a false sense of safety, complacency and an underestimation of risk. Things just always *can* go wrong. I'd say Murphy's Law applies: *If people are allowed to screw up, they eventually will.*
Ben Put	This is referred to in Minsky's *Financial Instability Hypothesis*: Financial systems swing between robustness and fragility and these swings are an integral part of the process. Minsky claimed that in prosperous times, when corporate cash flow rises beyond what is needed to pay off debt, a speculative euphoria develops, and soon thereafter debts exceed what borrowers can pay off from their incoming revenues, which in turn produces a financial crisis. As a result of such speculative borrowing bubbles, banks and lenders tighten credit availability, even to companies that can afford loans, and the economy subsequently contracts.
Winnie-the-Bear	George?
George Jones	What Ben is trying to say is what all mariners have known for generations: a calm sea is nothing else than a storm in the making. Be careful out there. Even Minsky's *ponzi finance* works as long as asset prices are rising. But once the bubble is pricked, the system destabilizes like a storm at sea releasing its pent-up energy all at once just to calm down thereafter for the energy of the next storm to build up slowly.
Winnie-the-Bear	So you're saying that the seeds for the next meltdown are planted as we speak?
George Jones	Of course. Given that the *implicit* governmental guarantee for *systemically important* institutions is now an *explicit* one, the whole show really starts here.

Winnie-the-Bear — Oh my! Sounds like we're in for a rocky ride. Are you in the deflation or inflation camp?

George Jones — I'm in the Minsky camp. Minsky postulated that a world with a large financial sector and an excessive emphasis on the production of investment goods creates instability both in terms of output *and* prices. We should not see inflation and deflation as opposite scenarios. We could be in for a period of extreme price instability, in both directions, as the authorities slowly lose control of the situation; or don't.

Winnie-the-Bear — We'd better be prepared for the ongoing volatility then. In your view, was 2008 an accident or a systems' failure?

George Jones — Both. Let me explain. If you slip on a banana skin and hurt yourself, it's an accident, agree?

Winnie-the-Bear — Agree. I think I know where you're going with this. Had I foreseen the accident, it would not have occurred, right? *Personally, I think everybody who predicts the future with a straight face should be required to change out of the business suit, wrap himself in a gypsy shawl, wear one of those pointed wizard's hats with a picture of a crescent moon on it, and make conjuring sounds over a crystal ball. That way, everybody would know exactly what's going on and how much credibility to give it.*

George Jones — Yes; as Bill Gates made clear in 1981: *640K ought to be enough for anybody.* An accident is unpredictable by definition. In a complex system things are just a little bit more complicated…

Winnie-the-Bear — That's probably why it's called a complex system…

George Jones — Right. Research of accidents in complex man-made systems has shown that they are triggered not by one trivial banana skin but by about five to seven banana skins in a *certain* sequence. So there is a chaotic as well as a deterministic element. This is true with airliners, nuclear power plants, as well as with financial systems. In a letter to the Queen the Bank of England called the near collapse of the financial system a *failure of the collective imagination of many bright people.*

Winnie-the-Bear — Many bright people; yes, of course. *Never in the history of mankind have so many owed so much to so few.* So what were these five to seven banana skins?

George Jones — The first banana skin was the US president endorsing housing to people who couldn't afford housing.

Winnie-the-Bear — Was that before or after he endorsed *Enron*?

George Jones — Second, cheap money caused risk premiums to fall and leverage to rise in various markets. Central bankers are very nice people. Every time there is a fire somewhere in the financial system they come along and extinguish it. Third, banks found a way to sell sub-prime hamburgers for prime beef.

Winnie-the-Bear — So let's blame the bankers then? After all there is a saying that states: *Fool me once, shame on you. Fool me twice, shame on Wall Street.*

George Jones — Why blame the sellers and not the buyers? It was the buyers who confused the hamburgers and thought they had filet. Shouldn't foolishness be punished? Shouldn't markets serve as the ultimate teacher? Isn't *learning by doing* the best education? As Warren Buffet put it: *A pin lies in wait for every bubble. And when the two eventually meet, a new wave of investors learns some very old lessons: First, many in Wall Street—a community in which quality control is not prized—will sell investors anything they will buy. Second, speculation is most dangerous when it looks easiest.*

Ben Put — You are taking this too lightly.

George Jones — No, I'm not. Every buyer thinks he's getting a good deal at the time of purchase, otherwise he wouldn't buy. No one was ever forced to buy sub-prime hamburgers. If you drink ten expressos per day over ten years and *expect* to look like George Clooney, it's not the coffee manufacturers' fault if you find yourself walking home alone when the bar closes.

Winnie-the-Bear — I understand. *You live and learn. At any rate, you live.*

George Jones — Banks—by the way Winnie—were and are the most heavily regulated industry on the planet. You might as well blame bank regulation. A couple of years ago there was the joke that the traders occupied the large trading floor and the compliance officers occupy the small corner office and that soon the two would switch offices. It stopped being a joke.

Winnie-the-Bear — George, I sense that you have a tendency to blame the people who are responsible. I think I like that. Makes sense, doesn't it?

George Jones	Yes; and thanks. In the case of banks, you could also blame the shareholders. It is them who provide the capital and select their agents. German banker Carl Fürstenberg was probably on to something some hundred years ago when he said: *Share holders are impertinent and stupid – stupid because they trust other people with their money without having sufficient control; impertinent because they want dividends, that is, they also want to be rewarded for their stupidity.*
Winnie-the-Bear	Very funny. *Life is a tragedy for those who feel, but a comedy to those who think.* I too believe *you cannot deal with the most serious things in the world unless you understand the most amusing.* Let's move on. So far we've got three banana skins.
George Jones	The fourth banana skin were the rating agencies.
Winnie-the-Bear	The jokes keep coming. They too are regulated, right?
George Jones	Yes, of course. They gave the false filet a stamp of approval. The president endorsing retail folks to lever up and rating agencies having a weird business model by itself and in isolation are rather trivial and don't result in disaster. It is the combination…
Winnie-the-Bear	I think I've got that now. Butterfly rips the canvas and history takes its course. Please move on.
George Jones	Banana skin number five was the belief that house prices in the US cannot fall.
Winnie-the-Bear	Am not all too surprised. *There can be few fields of human endeavor in which history counts for so little as in the world of finance. Past experience, to the extent that it is part of memory at all, is dismissed as the primitive refuge of those who do not have the insight to appreciate the incredible wonders of the present.* Beliefs can be quite powerful, can't they?
George Jones	Yes. Different people have different beliefs. Some people believe man walked with dinosaurs, some don't; some people believe markets are efficient, some don't; some people believe they're Elvis, some don't; some people believe the Italian PM is groping nubile young wenches, some … well, never mind. Banana skin number six is an increase in complexity. The people who

had the responsibility didn't understand what was going on. We forgot Peter Lynch's wisdom: *Never invest in an idea you can't illustrate with a crayon.*

Winnie-the-Bear
The farther one goes; the less one knows.

George Jones
I always knew there is a philosopher in you. This brings me to a related point. Prior to the idea of *diversification* taking over investment mantra on Wall Street in the 1960s, the wisdom of the time was actually portfolio *concentration* rather than diversification. The belief was to hold assets in which you had conviction or some special insight, some sort of edge.

Ben Put
You're not suggesting we're going back to managing money like in the 1950s, are you?

Winnie-the-Bear
I think I know where George is going with this: *You will go most safely by the middle way.*

George Jones
Exactly. Combine the two ideas. An investor who invests in hedge funds needs to diversify; even *Ardi* knew that. However, the hedge fund itself is normally very focused on one particular area of the market place and operates in a lean and entrepreneurial fashion rather than in a bureaucratic and committee-based fashion. Next to being good at marketing, many hedge funds have a high degree of specialization or, ideally, some sort of competitive advantage—their edge—in the market place. So a hedge fund portfolio incorporates both ideas. You have conservative *risk* mitigation on one end but you still have the entrepreneurial drive and focus that generates the *returns* on the other end.

Winnie-the-Bear
Well, I will need to think about this a bit. The sixth banana skin was complexity. I've got a T-shirt that says *Simplicity is the ultimate sophistication.* I thought that was obvious to everyone.

Ben Put
This goes by the name of *critical state universality*. Critical state universality dictates that the vast majority of details normally integral to our ideas about a system's activity become irrelevant once the critical state is achieved. That is to say we can legitimately ignore many of the things that are ordinarily considered important and still understand the situation well enough to exert some control. In fact, we have to do this or else risk being confused and misled by excess information.

Winnie-the-Bear	George?
George Jones	What Ben is trying to say is that *if someone weighed somewhere between 300-350 pounds, you wouldn't need precision - you would know they were fat.*
Winnie-the-Bear	Got that. Banana skin number seven?
George Jones	A run on the *shadow banking system.*
Winnie-the-Bear	What's a shadow banking system? Sounds shady. Sounds like someone hiding something.
Ben Put	The shadow banking system consists of non-bank financial institutions that play a critical role in lending companies the money necessary to operate. Shadow banking institutions are typically intermediaries between investors and borrowers. By definition, shadow institutions do not accept deposits like a depository bank and therefore are not subject to the same regulations.
Winnie-the-Bear	George?
George Jones	The basic idea is to move risky assets that would require large amounts of regulatory capital off balance sheet so the risky assets that *would* require large amounts of regulatory capital *do not* require large amounts of regulatory capital.
Winnie-the-Bear	Sounds wrong. Is this being fixed?
George Jones	Not really. You do not accumulate political capital by fixing things. You accumulate political capital by talking about bonuses.
Winnie-the-Bear	Or by demonizing hedge funds. *Any fool can criticize, condemn and complain – and most fools do.* I think I understand. Any more banana skins? We've got seven.
George Jones	I think we're done. Although of course we could go on. Some blame the dramatic transformation of markets due to deregulation as a major cause for the mess. The belief in the efficiency of markets was—as it turned out—too strong. Some argue that it was investment banks changing from personal liable entities to corporations with limited liability and hence an incentive to increase leverage. Some blame the oligopolistic nature of banking as part of the problem. Some thought it was rather weird that the

ladies and gentlemen in Basel allowed banks to come up with their own risk models when determining risk for setting aside regulatory capital as well as ignoring the systemic risk from *concentration* of securities more or less in its entirety. The issue of contagion and herding due to the Basel accords will require some rethinking to say the least. Some argue it was the lack of congressional oversight due to the influence of campaign contributions in the US. Some blame derivatives like credit default swaps for the crisis. There certainly seems to have been some sort of *regulatory gap*.

Winnie-the-Bear — I heard derivatives are *weapons of mass deception … Like hell, they are easy to enter and almost impossible to exit.*

Ben Put — Derivatives are just *tools*. The tools do no harm by themselves. Take a chainsaw as an example. A chainsaw is a tool that allows you to cut trees much more efficiently than the next best alternative. However, if someone slices up his mother-in-law using a chainsaw, it is hardly the fault of the chainsaw, is it?

Winnie-the-Bear — Obviously not. I know where you're going with this. It's the *use* of the tool, not the tool itself that can cause harm. So it's the son-in-laws' fault?

George Jones — Well, some would argue it's the mother-in-laws' fault...

Ben Put — Whatever the case might be, the responsibility doesn't rest with the chainsaw. If someone is determined to blow up a bank out of Singapore, he will do it with or without derivatives. Derivatives just allow you to blow up a bank out of Singapore more efficiently.

Winnie-the-Bear — Isn't it the *size* of these markets which is the major concern?

George Jones — You're trivializing the risks of derivatives to the system Ben. You address the complexity and the hidden leverage but not the huge off-balance sheet characteristics that are the major risk to the overall system. Market participants may ignore these systemic risks, believing they can always sell their positions, but regulators cannot ignore them because if too many participants are on the same side, positions cannot be liquidated without causing a discontinuity or a collapse. You wouldn't want fans of the death metal band *Obituary*—all of whom are chainsaw experts, I'm sure—turning up for a concert all equipped with chainsaws, would you?

Ben Put	Fair enough. It is the *misuse* that is harmful to the single entity but it is the *size* and *off-balance sheet risk* which is the big issue for the system as a whole.
Winnie-the-Bear	Didn't hedge funds contribute to the mess of 2008? I was told that hedge funds operate with tons of leverage including derivatives. Is that true?
George Jones	Yes, they do. Prior to the crisis, average leverage was, say, three times equity.
Winnie-the-Bear	Holy Moly. Three times? That's horrendous.
George Jones	Pretty cheeky, isn't it? Although in their defense, two thirds typically had leverage of two to one or less. That's prior to the mess of 2008.
Winnie-the-Bear	How can they sleep at night? I find even two times a lot. Long-only managers use none. I sense that I am missing something. Why is leverage important?
George Jones	Leverage relative to equity is a measure for how bad things will get if you screw up. If you buy a house for say one million and your equity is 200,000 then you, as a private person, are more highly leveraged then about 90-95% of all hedge funds.
Winnie-the-Bear	What?
George Jones	Yes, many people don't realize this. If your house loses 20% of its value or more, you have a problem. Banks use leverage of 20, 30, 40, or 50 times their equity….
Winnie-the-Bear	What?
George Jones	One German bank actually has a balance sheet leverage that is 70 times their equity as we speak.
Winnie-the-Bear	And I thought hedge funds were risky. Do people know this? I mean, do people know that banks are highly leveraged and hedge funds look vestal by comparison?
George Jones	No. Well, now they do. Derek Bok once said…
Winnie-the-Bear	Derek Bok—as in the lady coming out of the water in *10*…

George Jones — No, Derek Bok, as in the former president of Harvard University, but thanks for the mental image… Where was I? Yes, he said, self-servingly and tongue firmly in cheek I'm sure: *If you think education is expensive, try ignorance.*

Winnie-the-Bear — Making a fuss about hedge fund leverage while accepting much higher leverage with banks seems a little odd from today's perspective, I must say. Given what you're saying, I'd rephrase your quote to: *If you think hedge funds are risky, try banks.*

George Jones — Well-deployed financial leverage can greatly enhance performance. Nearly every corporation and every homeowner uses it in forms of loans, mortgages and so on. However, excessive leverage can be ruinous. What now seems apparent is that it is banks and home owners that misjudged the dangers of using leverage: not hedge funds. It is not leverage by itself that is dangerous; it is *excess leverage* that is dangerous to the entity using the leverage as well as the overall system. Bottom line is that drinking a glass of claret in the evening is good for you while downing a double magnum is not.

Winnie-the-Bear — What about *fund of hedge funds*? I hear they don't use leverage. Aren't they pretty dull?

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George Jones — Yes, pretty dull. However, that's a good thing. As I'm sure Gordon Gekko will state in his new film: *Dull is good*. There is potentially a link between tediousness and prosperity that is often overlooked. Survival is a prerequisite for long-term prosperity and it's typically the dull who survive. Take the Swiss as an example.

Winnie-the-Bear — You mean the yodeling, lederhosen-wearing, holey-cheese eating inhabitants of the Alps?

Ben Put — I think I know where you're going with this. As Orson Welles's Harry Lime famously noted in the 1949 film *The Third Man*, Italy under Borgias had 30 years of warfare, terror, murder and bloodshed, but produced Michelangelo, Leonardo da Vinci and the Renaissance. Switzerland, in contrast, had 500 years of brotherly love, democracy and peace. And what did that produce? The cuckoo clock.

George Jones	They are perceived as rather dull, I know. It's because the Swiss stayed out of the big wars, had no battlefield victories and glorious generals to speak of, never had colonies, had no social upheavals. They never had a left-of-center governmental majority screwing up their economy in their entire history and they don't even strike. They have produced hardly any people of world fame; no poets, no composers, no philosophers, no writers or painters of international acclaim; except perhaps a pedagogue, a psychiatrist, and a tennis player.
Winnie-the-Bear	Don't forget the lady coming out of the water in *Dr. No*…
George Jones	Yes, of course. Thanks for the mental image… Where was I? Yes, the Swiss. While they might or might not be perceived as dull, Switzerland is arguably one of the, if not the most prosperous country on the planet, especially if you add quality-of-life factors on top of GDP per capita.
Winnie-the-Bear	Not sure I know where you're going with this.
George Jones	The point is that large losses kill the rate at which capital compounds. Hence, boring is good; or as Oscar Wilde put it: *It is better to have a permanent income than to be fascinating.*
Winnie-the-Bear	I think I can relate to that. *I'm more concerned about the return of my money than with the return on my money.*
George Jones	Exactly. As one famous hedge fund manager put it: *If investing is entertaining, if you're having fun, you're probably not making any money. Good investing is boring.* Compounding capital tediously—as in *dull*—with no major interruptions results in long-term prosperity.
Winnie-the-Bear	I know. *Compound interest is the eighth natural wonder of the world and the most powerful thing I have ever encountered.*
George Jones	That's essentially what fund of hedge funds try to do.
Winnie-the-Bear	What? Being dull?
George Jones	No, compound capital continuously without major interruptions. It was the investment biker who hit the proverbial nail on its proverbial head: *The trick in investing is not to lose money. That's the most important thing. If you compound your money at 9 percent a year, you're better off than investors whose results jump up and down, who have some great*

	years and horrible losses in others. The losses will kill you. They ruin your compounding rate, and compounding is the magic of investing.
Ben Put	Didn't work in 2008, did it?
George Jones	No, it didn't. However, had you invested 100 with the average fund of hedge fund at the beginning of the decade you would stand at 143 by August 2009 net of all fees. Had you invested 100 in US stocks your wealth would be at 70.
Winnie-the-Bear	Hold on. That's a big difference. A gentleman from Wharton keeps telling me that stocks go up in the long-term.
George Jones	Fascinating, isn't it? The problem is you might not live long enough to experience the long-term. The Nikkei would need to compound at more than ten percent per year for the next fifty years to pick up a four percent equity risk premium for the seventy year period to 2059.
Winnie-the-Bear	Got that. *Forever is composed of nows.* Surviving the short-term is a prerequisite for experiencing the long-term.
George Jones	By the way, for believing that stocks *always* go up in the long-term you need to ignore history more or less in its entirety. Societies, currencies, and equity markets have collapsed in the past and will continue to do so. Ever been to Germany, Japan, China, Russia, Portugal, Egypt, Argentina, or Zimbabwe? There might be hundreds of reasons why a long-only strategy works in the long-term. I just can't think of *one* reasonable one.
Winnie-the-Bear	I think I now understand where you're going with this. *It ain't what you don't know that gets you in trouble. It's what you know for sure that just ain't so.*
George Jones	Couldn't have articulated it better myself. And this is why dull is good and the Swiss are prosperous. The stock market is exciting. It is very exciting to lose half of your investments not once within a decade but twice. Very exciting. Quite thrilling, really.
Winnie-the-Bear	*The difficulty lies, not in the new ideas, but in escaping the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.*
George Jones	These are wise words, Winnie. Who said that?

Winnie-the-Bear	I just did. Stay focused please. So dull is good. Given what you just said I'm tempted to argue that *the first rule of investment is don't lose. And the second rule of investment is not to forget the first rule*. What about the industry as a whole? Is it going to survive? It's hardly dull.

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George Jones	The hedge fund industry has survived many storms and is currently recovering from the 2008 tsunami to be prepared for the next one. It is not entirely random as to who survives in stressful situations or hostile environments and who does not. In mountaineering, it is not the best climbers who survive an accident but those who are best prepared and have no mismatch between perceived risk and true risk. Chance, as nearly everywhere else in the universe and human affairs, also plays a role. Louis Pasteur's statement, *chance favors only the prepared mind,* seems to hold true when survival in extreme sports is concerned. Or, as Benjamin Franklin put it: *By failing to prepare, you are preparing to fail.*
Winnie-the-Bear	I understand. *The key is not to predict the future, but to be prepared for it.*
George Jones	Absolutely. It also holds true for hedge funds. Active risk managers can get into dire straits. They can also either fail or endure, but those who have an edge in aligning true risk with perceived risk may improve their chances of survival.
Winnie-the-Bear	You're saying doing well under stress is key?
George Jones	Yes. *Stress* is inevitable with any competitive environment…
Ben Put	Stress releases cortisol into the blood. It invades the hippocampus and interferes with its work. Stress causes most people to focus narrowly on the thing that they consider most important, and it may be the wrong thing. Under stress, emotion takes over from the thinking part of the brain, the neocortex, to affect an instinctive set of responses necessary for survival. This has been referred to as the *hostile takeover of consciousness by emotion.*
Winnie-the-Bear	George?
George Jones	What Ben is trying to say is that under stress what matters is not the number of books you have in your library but who you are. As Aldous Huxley put it: *Experience is not what happens to a man; it is what a man*

does with what happens to him. Emotions rule. Emotions are genetic survival mechanisms, but they do not always work for the benefit of the individual. They work across a large number of trials to keep the species alive. The individual may live or die, but over a few million years, more mammals lived than died by letting emotion take over, and so emotion was selected as a stress response for survival.

Winnie-the-Bear — So you're saying that *education is an admirable thing, but it is well to remember from time to time that nothing that is worth knowing can be taught.*

George Jones — From time to time, yes. As one famous hedge fund manager put it: *Nothing is constant. Nothing is the way it's always been. So what I find is that people who are really good at this (managing risk), have great intuition. They have great instinct. Their gut actually tells them something. The mathematics are important because they demonstrate you understand the problem, but ultimately the decision about whether or not to take a given risk, I think is really a human judgment call in every sense of the word.*

Winnie-the-Bear — How should I behave in a stressful situation? Any tips?

George Jones — Crack a joke.

Winnie-the-Bear — What?

George Jones — Humor allows you to cope with fear. It is not a lack of fear that separates elite performers from the rest of us. They are afraid too, but they are not consumed by it. They manage fear…

Winnie-the-Bear — … as in *to conquer fear is the beginning of wisdom.*

George Jones — Yes. They use it to focus on taking correct action. Moods are contagious, and the emotional states involved with smiling, humor, and laughter are among the most contagious of all. Whether hedge fund investors share a laugh when their portfolio is under water, I do not know. According to this research, they should.

Winnie-the-Bear — If humor is the best approach when dealing with fear and stress, what is the worst?

George Jones — Hubris.

Winnie-the-Bear	I think I know that. *The greatest deception men suffer is from their own opinions.*
George Jones	Absolutely. That's why *conviction* mentioned earlier is a double-edged sword. Here's a true story. It's about a US Army Ranger, arguably someone well trained for survival in hostile environments, who took a guided commercial rafting trip, fell off the boat and drowned in shallow water. The Ranger refused being rescued. He floated calmly downstream. He felt he was in no real danger because of all the training he had had under much worse conditions. Then he arrived at a place where a big rock blocked the middle of the current. He was sucked under, pinned, and drowned. The official report said, *the guest clearly did not take the situation seriously.*
Winnie-the-Bear	How sad is that. *Nothing in all the world is more dangerous than sincere ignorance and conscientious stupidity.*
George Jones	The take-away of this story is twofold. First, elite training can cause overconfidence or an underestimation of risk. In the case of the Army Ranger, this was clearly the case. Other examples include mountain climbers who climbed in the Himalayas yet died at their local beginners' mountain that they thought they knew well. Second, experience is a good thing. However, most professionals with experience *know* that they have experience. This inflates confidence. This self-confidence is probably beneficial when the experience *applies* to the current environment. However, experience can turn into ignorance when circumstances change and the experience *does not apply* anymore. Changing environments can cause a mismatch between true risk and perceived risk and impact one's abilities to deal with it.
Winnie-the-Bear	I think I understand. You advocate being open-minded and intellectually flexible. *Single-mindedness is all very well in cows or baboons; in an animal claiming to belong to the same species as Shakespeare it is simply disgraceful.* A crisis is by definition a different environment. Different skills apply. I think *the whole problem with the world is that fools and fanatics are always so certain of themselves, but wiser people so full of doubts.*

George Jones	Exactly; or as Galbraith put it: *One of the greatest pieces of economic wisdom is to know what you do not know.* However, survivors are not always loved. Take cockroaches for example…
Winnie-the-Bear	I thought the going term for hedge funds was *locusts*.
Ben Put	I'd say *cockroaches* would be more appropriate: they're a nuisance and there's never just one of them…
Winnie-the-Bear	That's not very nice of you to say. But then, *words ought to be a little wild, for they are the assault of thoughts on the unthinking.*
George Jones	Everyone dislikes cockroaches. This means that there is probably something quite remarkable to say about them. And there is. The cockroach is the oldest insect on our planet. It has been around for at least 325 million years. It can eat almost anything, can live 45 days without food, has a great defense system and an effective reproductive system.
Winnie-the-Bear	I think I know where you're going with this: Hedge funds have been around for decades, can nourish on nearly any inefficiency, can live off the management fee for a while, and can move rapidly to a defensive stance through hedging and cutting losses short. As to their reproductive system, I assume …
George Jones	…it's beyond the scope of this series, yes.

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Winnie-the-Bear	So hedge funds are unpopular. I guess *it is dangerous to be right in matters on which the established authorities are wrong.* Do high fees contribute to hedge funds' unpopularity?
George Jones	Could be. Douglas Adams comes to mind: *Many men of course became extremely rich, but this was perfectly natural and nothing to be ashamed of because no one was really poor, at least no one worth speaking of.*
Winnie-the-Bear	Doesn't make them more popular, does it?
George Jones	No, it doesn't.
Winnie-the-Bear	How can they get away with such high fees?
George Jones	The reason fees in traditional asset management are lower is because you, as an investor, do not really need external help to compound capital

negatively, do you? Long-only managers in equities lost roughly 50% of their assets not once but twice this decade. Managing money relative to a benchmark is not the same as managing money where safety of principal is part of the value proposition. That's why some people refer to the traditional asset management industry as *fun* management instead of *fund* management: It must be fun to manage other people's money and not being held accountable for losing it.

Winnie-the-Bear *Finance is the art of passing currency from hand to hand until it finally disappears.* Makes you wonder, doesn't it? But in 2009 the stock market is up 22% while hedge funds are only up 20%. They've underperformed.

George Jones Who cares? In 2008 the stock market fell by 45%. This means investors starting at 100 went to 55 and the 22% in 2009 only brought them back to 67. Hedge fund investors on the other hand lost 20% in 2008; they therefore went from 100 to 80 and the 20% in 2009 brought them back to 96. Going from 100 to 67 with other people's money isn't that difficult and therefore doesn't carry a high price tag.

Winnie-the-Bear Hold on. Hedge fund investors only went from 100 to 80 and back to 96 if they didn't redeem at 80.

George Jones Yes, of course. The math works differently if you buy high and sell low.

George and Ben had to run. Winnie thanked his friends for their patience and left some open questions for another day.