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A Perfervid Moment

(A conversation with Bun Bun, the author's family pet and early-morning debating partner.)

PM: Good morning, Bun Bun. Sorry to disturb your play, but we have some work to do. It's time for a chat about the global economy and financial markets for the year ahead.

BB: Don't know what you are talking about, Mac. We've never done this before. What's the skinny?

PM: Not logical that you would know, Bun. It's a tradition I started six years ago with the dearly-departed Morgan le Fay, my companion through thick and thin in both my professional and private lives. She went to bunny heaven last March after nine glorious years on this earth.

And you entered my life just a few weeks later. Note, I said "entered my life," not "replaced Morgan," as she could not and can not be replaced. You are your own bunny, Bun Bun, and one whale of a lot of fun; even more mischievous than Morgan was when she was two years old. Great to have you as a member of the family.

BB: Great to be here, Paul. I can call you Paul, right, not always Mac? Unlike Morgan, I tend to call my boyfriends by their first names.

PM: Sure, Bun. No problem. You can call me anything you want, as long as you religiously use your potty box while hanging out here in my study.

BB: Cool. You, yourself seem to have been hanging out here in the study more in recent months than when I first moved in. Work been getting to you?

PM: Not getting to me, Sweetheart, just been really intense — A Minsky Moment, which doesn't come along many times, only four or five times so far in my almost twenty-five years in this business.

BB: OK, I'll take the bait. Tell me once again just who this Minsky fellow is and why it's his moment. I thought this was my moment.

PM: Hold the sass, Bun Bun. Professor Minsky passed away in 1996, so first thing we do when we discuss him is show reverence. Second thing we do is appreciate his Financial Instability

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Hypothesis (FIH), which richly explains the endemic boom-bust cycles of capitalism, including the double bubbles in property prices and property credit that are presently busting. When the boom gives way to bust, you have the Moment.

BB: Why do you say endemic boom-bust cycles? Isn't capitalism driven by that Smith dude's invisible hand, where markets are efficient and always find just the right prices for things through what guys like you call a "discovery process?"

PM: Most of the time that is right, Bun. But not all the time. Indeed, the most interesting, and profitable, times to be involved in investment management are when Mr. Smith's invisible hand is visibly broken. What Mr. Minsky's FIH did was to provide us a framework for how and when Mr. Smith's hand would break.

BB: Hold on here, I thought your hero John Maynard Keynes was the guy who wrote the book on capitalism's foibles, notably in Chapter 12, which you recite to me all the time.

PM: You've got a good memory, Bun Bun. Mr. Keynes was both the inventor of macroeconomics, as we now know it, as well as a seminal behavioural economist. He did indeed break the straight jacket of microeconomics, which is really what Adam Smith's invisible hand is all about. Keynes demonstrated that what holds for the individual doesn't necessarily hold for a community of individuals —something known variously as either the fallacy or the paradox of aggregation. He also demonstrated that expectations, rational and irrational, are key determinants of investment, which is the straw that stirs the capitalist drink. Animal spirits, he called them.

BB: Now that's something I know about, Mac. Indeed, I've been meaning to talk to you about those foul-spirited animals called coyotes that run in packs at night on the golf course, waking me up with awful barking when they catch and kill something, probably one of my in-the-wild kinfolk. Why don't you do something about them?

PM: I do, Princess; I protect you from them, by making sure you're either securely in your condo outside or here in my study. It's against the law to shoot the things and I don't like to shoot things anyway. I've never owned a gun, you should know. But you do make a good point: some animals tend to run in packs, and capitalists have a tendency to do the same thing. Indeed, that's part and parcel of Mr. Minsky's FIH.

BB: Meaning that capitalists bark and bray when they gang up on some poor soul?

PM: Not exactly, though I've known bond traders with the proclivity. The essence of Minsky's FIH is that stability is destabilising because capitalists have a herding tendency to extrapolate stability into infinity, putting in place ever-more risky debt structures that undermine stability.

BB: Ah, kinda like the theory of that Hegel chap your friend Peter Bernstein writes about sometimes, who argued that a thesis runs into an antithesis which begets a synthesis.

PM: I suppose you can think of it that way, though Peter is better at weaving the story in those terms than I am. The thesis of Minsky's FIH is the presumption of indefinite, if not infinite stability, while the antithesis is the ever-greater leverage that capitalists assume on the basis of the thesis, which ultimately begets the synthesis called the Minsky Moment.

BB: So that's what happened to the housing market, you say? People bet that prices would stably rise forever and financed that bet with excessive debt?

PM: Precisely, Princess. Indeed, Professor Minsky laid out three types of debt on the way to the Minsky Moment. And the mortgage debt market followed his path almost precisely — a forward Minsky Journey, I call it. The first type of debt is actually quite stable, what he called a Hedge Unit. Nothing to do with hedge funds, I hasten to add, just a description of the debt unit — one where the borrower's cash flow is sufficient to both fully service and amortise the debt.

In the mortgage arena, this is known as an old-fashioned loan, like my parents had, as well as the one I used to have. Every month, you write a check that pays the interest plus nibbles away at the principal, and voila, when the last payment is made many years down the road, usually thirty, the mortgage simple goes away and you own the house free and clear. Ergo, it's a "hedged" unit of debt.

BB: Kinda boring, no?

PM: Actually not, Bun Bun. I remember back when I was a kid people in the neighbourhood and at church having something called a Note Burning Party, when they'd invite family and friends over for a celebration when they had paid off their mortgage, literally putting the note in a punch bowl and lighting a match to it. In fact, many families would make double monthly payments on their mortgages so as to accelerate the day of the Note Burning Party. They were actually not boring, but quite fun.

BB: All depends upon what you mean by fun, I suppose, as Bill Clinton might say. In any event, what's the next, more risky unit of debt in the forward Minsky Journey?

PM: It's called the Speculative Unit, Bun. It comes about when people are so con

fident in stably rising house prices that they find the Hedge Unit to be, as you put it, boring. Technically, Minsky defined it as a loan where the borrower's cash flow is sufficient to fully service the debt, but not amortise the principal. Thus, when the loan matures, it must be re-financed.

In the mortgage arena, this type of loan is called an interest only, or IO, with a balloon payment at maturity equal to the original principal amount. Thus, these types of borrowers are speculating on at least three things at the time of refinancing: the interest rate hasn't risen; terms and conditions, notably down payment, haven't tightened; and perhaps most importantly, the value of the house hasn't declined.

BB: So rather than a Note Burning Party, these folks have a rendezvous with a mortgage broker?

PM: Afraid so, but as Minsky taught, when credit is evolving from hedge units to speculative units, there is no fear, as the journey increases demand for the underlying assets that are being levered, driving up their prices. Think about it this way, Bun: Most people don't mentally take out a mortgage for X dollars, even though they literally do, but rather take out a mortgage that requires Y dollars for a month payment, or monthly nut, as it is call 'round here.

In the mortgage arena, that means that a speculative borrower can take on a larger mortgage than a hedge borrower, because the monthly payment is lower for the speculative borrower — he's paying only interest, not that extra amount every month to pay off the principal over time.

Thus, the speculative borrower can pay a higher price for a house than a hedge borrower with the same income. Accordingly, as the marginal mortgage is taken down by a speculative borrower, it drives up home prices, truncating the risk that the value of the house will fall before the balloon payment comes due.

BB: Sounds like alchemy to me, Mac. What you say makes sense only so long as there is an infinite pool of speculative borrowers, driving up the price, *de facto* collectively validating the speculative risk they took. Sounds like a bubble to me. There is a finite pool of homebuyers, driven by demographics. You called them Plankton, the first-time buyers, I think last March. When the pool of Plankton runs dry, game over, right?

PM: Actually, Bun, it was my boss and partner Bill Gross that coined the Plankton Theory[1] , and he did that over twenty years ago. But your logic is sound, which ties back to Minsky's thesis: stability ultimately begets instability. In this case, expectations of stably rising home prices ultimately run into the reality of affordability for the Plankton.

But that doesn't in and of itself stop the game. There is a final leg to a forward Minsky Journey.

BB: Pray tell what that is. Why doesn't it end when the pool of Plankton runs dry?

PM: Because as the famous economist Forrest Gump explained, stupid is as stupid does. Or more politely put, human nature is as human nature does. And humans are not inherently value investors, but momentum investors. Human beings are not wired to buy low and sell high; rather, they are wired to buy that which is going up in price.

BB: But that makes no sense, Mac, particularly when there is a known limit to size and affordability constraints for the Plankton. Rational people would not buy a house for a higher price than a guy in the same financial circumstances could afford to pay.

PM: Dear Bun, we are not talking about rationality here but human nature. They are not one and the same thing. Adam Smith's invisible hand is actually attached to human forearms, and humans are not only momentum investors, rather than value investors, but also inherently both greedy and suffering from hubris about their own smarts. It's sometimes called a bigger fool game, with each individual fool thinking he is slightly less foolish than all the other fools.

BB: Okay, I can buy that; you humans do silly things sometimes, like talking economics with rabbits. Isn't a bigger fool game also sometimes called a Ponzi Scheme?

PM: Indeed it is, Sweetheart, and Professor Minsky fully recognised that. The last debt unit on his forward Journey is called a Ponzi Unit, defined as a borrower who has insufficient cash flow to even pay the full interest on a loan, much less pay down the principal over time.

BB: Hold the phone here, Mac. How and why would such a borrower ever find a lender to make him a loan? That person would be a self-certified fool, no?

PM: You're a smart bunny, Bun Bun. Very smart. But you seem to be struggling with this concept that human nature is as human nature does. As long as home prices are universally expected to continue rising indefinitely, lenders come out of the woodwork offering loans with what is called negative amortisation, meaning that if you can't pay the full interest charge, that's okay; they'll just tack the unpaid amount on to your principal.

At the maturity of the loan, of course, the balloon payment will be bigger than the original loan. But that's OK, as long as expectations of stably rising home prices are realised.

BB: But they can't forever be realised! Not only will the pool of plankton run dry, but the pool of fools will run dry as well. At some point, valuation does matter!

PM: Indeed it does, Bun, indeed it does. And that's your Minsky Moment!

BB: How could lenders ignore this obvious truth?

PM: Because while it was going on, Bun, they were making tons of money. Tons of money does serious damage to the eyesight.

BB: But doesn't your business have the moral equivalent of optometrists, called regulators and the rating agencies?

PM: Of course, Bun, but financial optometrists are humans, just like their patients. As long as the forward Minsky Journey was unfolding, rising house prices covered all shameful underwriting sins. Essentially, the mortgage arena began lending against asset value only, rather than asset value PLUS the borrowers' income.

BB: Ah, so essentially the mortgage market became like margin credit on a stock portfolio?

PM: Sorta, but only sorta, Bun. In the case of stocks, you can't borrow more than 50% of the purchase value of the stock, by Fed rules, and most brokers require that you put up more if the real-time market value of the stock falls enough to take the value of the loan to over 70% of the value of the stock. It's called a margin call, and if you don't meet it, your broker has the right to sell your stock, so as to be made whole on the loan.

In the case of sub-prime lending, there wasn't such a requirement for the borrower to put up capital, called no-down payment loans. And there wasn't a real time mark-to-market on the house. So, as long as the borrower stayed current on the interest — even if not the full amount, with the unpaid amount being added to the principal — and the value of his house went up, it looked like he was a great borrower, despite the fact he didn't have the income to pay off the mortgage over time.

Both regulators and rating agencies were beguiled into believing that the very low default rates during the period of soaring home prices were the normalised default rates for low quality borrowers, particularly ones with no down payment skin in the game.

The rating agencies' Mr. Magoo act was particularly egregious, because the lofty ratings they put on securities backed by these dud loans were the fuel for explosive growth in the Shadow Banking System, which issued tons of similarly highly-rated commercial paper to fund purchases of the securities.

You are right, Bun, in that mortgage lending against house values, rather than house values plus the borrower's income, is similar to borrowing stocks on credit — there is a day of reckoning, either the day the balloon comes due or adjustable rates reset up.

When that day arrives, there is effectively a margin call. If the value of the house hasn't gone up, Ponzi Units, particularly those with negatively-amortising loans, are toast. And if the price of the house has fallen, Speculative Units are toast still in the toaster.

BB: Ergo, the Minsky Moment! Now I get it: The property bubble stops bubbling and when it does, both the property market and the Shadow Banking System go bust. Which is followed by the reverse Minsky Journey, right?

PM: Yea verily, Princess, I say unto thee. Many is cold, but few is frozen. Many is called, but few is chosen.

BB: Don't know what that means, but never mind. Sounds like you're talking about Secretary Paulson's plan to freeze interest rates for the irresponsible while leaving the responsible high and dry. But what do I know? I'm tired of talking about the past.

Let's talk about the future. Where are we on this reverse Minsky Journey? Is it a sprint or a marathon?

PM: Fair enough, Princess. The past is the past. But it is important to understand the past to forecast the future. Must admit, it still befuddles me that so many people are still trying to figure out the past, as if it's inscrutable. Nothing inscrutable about it at all, Bun. Classic double bubbles of an asset and lending against that asset.

BB: But if it was so classic, why didn't policy makers do something to stop it, like you prevent me running 'round outside at night when those coyotes run wild? Are they not telling the full truth when they say they can't recognise a bubble until it proves its existence by blowing up?

PM: Not sure I want to question their veracity, Bun Bun, though I am tempted. What I can tell you is that Fed Chairman Bernanke, in his very first speech as a Fed Governor, back on 15 October 2002, gave a wonderful, and very correct analysis about detecting bubbles.

BB: Do tell! Quote him, as you are wont to do.

PM: Here goes:

> *"Another possible indicator of bubbles cited by some authors is the rapid growth of credit, particularly bank credit (Borio and Lowe, 2002). Some of the observed correlation may reflect simply the tendency of both credit and asset prices to rise during economic booms. However, to*

the extent that credit expansion is indicative of bubbles, I think that empirical linkage points to a better policy approach than attempts at bubble popping by the central bank.

During recent decades, unsustainable increases in asset prices have been associated on a number of occasions with botched financial liberalization, in both emerging-market and industrialized countries. The typical pattern is that lending institutions are given substantially expanded powers that are not matched by a commensurate increase in regulatory supervision (think of the savings and loans in the United States in the 1980s).

A situation develops in which institutions can directly or indirectly take speculative positions using funds protected by the deposit insurance safety net—the classic "heads I win, tails you lose" situation.

When this moral hazard is present, credit flows rapidly into inelastically supplied assets, such as real estate. Rapid appreciation is the result, until the inevitable albeit belated regulatory crackdown stops the flow of credit and leads to an asset-price crash.

Bubbles of this type may be identifiable to some extent after they have begun, but the right policy is to do the financial deregulation correctly—that is, in a way that does not allow speculative misuse of the safety net—in the first place. Or failing that, to intervene and fix the problem when it is recognized."[2]

BB: Excellent analysis by Mr. Bernanke, Paul, but why did he focus on the connection between asset bubbles and bank credit, rather than asset bubbles and credit broadly defined. Didn't he know about the Shadow Banking System, which created the credit bubble that financed the property price bubble?

PM: I've never asked him directly, Bun. But that doesn't do damage to his essential argument, but rather reinforces it: *"During recent decades, unsustainable increases in asset prices have been associated on a number of occasions with botched financial liberalization."* Explosive growth in the Shadow Banking System was *"botched financial liberalization."*

BB: That might be true, Mac, but the pecking order for botchery must start, it seems to me, with the originate-to-distribute subprime mortgage market. Which, by the way, I think should simply be called the junk mortgage market. You don't buy used parts for your car at a subprime yard, do you? Junk is junk, no?

PM: Fair enough, Princess. Bunnies don't have to be as politically correct as creatures who walk upright on two legs. You are right that the Shadow Banking System was eating the cooking of the originate-to-distribute mortgage brokers,

so it is reasonable, I think, to trace the source of the underwriting debauchery up that brown creek. But don't forget that the rating agencies blessed the junk as non-junk.

BB: My memory is good on that; just trying to sort out the villains, the enablers, the fools and the blind. And it seems to me that the Fed was some combination of enabler and blind. Under law passed by Congress in 1994, the Fed has the power to legally define what constitutes sensible mortgage underwriting standards, even for the fly-by-night, originate-to-distribute outfits, and the Fed chose not to exercise that power.

If the Fed had acted proactively, maybe we'd be in less of a mess now.

PM: Can't disagree with you there, Bun. But you got to remember two things. First, while it is true that the Fed has that power, and is exercising it now, the Fed's powers of enforcement are more narrow — they didn't and don't regulate independent mortgage originators. Thus, even now, with tougher underwriting standards to be laid down for all originators, it still will be difficult for the Fed to get at the fly-by-nighters.

And second, you gotta remember that the Fed operates in a political milieu, and during the boom, there was very little political push for stopping the good times. Washington is always reactive, never proactive, in dealing with fraternity parties.

BB: Touché, Paul, touché. Let's move on. How long is it going to take to deflate the double bubbles of the property/mortgage markets and the Shadow Banking System?

PM: I wish I knew, Princess, because the answer to that question is by far the most important variable in forecasting where the global economy and markets will go in 2008.

What both bubbles need to complete the deflation process is what Alan Greenspan calls a "selling climax" — essentially an auction **with no reserve prices**, in which the huge overhang of unsold and default property is liquidated, as well as the junk mortgage securities of shadow banks (as well as conventional banks).

BB: So you're advocating Treasury Secretary Mellon's advice of the early 1930s to "liquidate, liquidate, and liquidate"? How dare you? I thought you were a principled populist!

PM: I am a principled populist, Bun Bun, and believe me, I'm no disciple of Mellon! Remember, Mellon also said to liquidate labour and that's the antithesis of both my personal and professional philosophy. My simple point is that the process of deflating bubbles is quicker the more rapid is the deflationary process. It's also true that the more rapid is the deflationary

process, the greater is the pain in the real economy, including sharply elevated risks of a recession.

Thus, policy makers have a tricky balancing act: let the deflationary pain unfold, as it's the only way to find a bottom of undervalued asset prices from presently overvalued asset prices, while providing sufficient monetary and fiscal policy safety nets to keep the deflationary process from spinning out of control.

BB: Why does the bottom for asset prices need to reach undervalued?

PM: Because potential buyers of property and securities being liquidated need to be incentivised by greed – the knowledge that they are paying prices below intrinsic value, which implies upside price gains in exchange for giving up the liquidity of always-trades-at-par cash.

BB: Kinda like a hockshop, that will give you $0.30 on the dollar for the putative intrinsic value of your watch?

PM: Something like that, though I don't think value investors, such as PIMCO, would particularly like that analogy. Anyway, it's important to note, Bun, that intrinsic value for asset prices is not a fixed concept, but a function of the discount rate used to value the stream of earnings or cash flow that asset prices are expected to generate.

The lower the discount rate, the higher is the discounted current value of those cash flows.

BB: So how long this deflationary process takes will be influenced by how quickly and how far the Fed cuts the Fed funds rate?

PM: Very good, Bun Bun! If you weren't a rabbit, I'd call you Grasshopper! The Fed can let the deflationary journey run its course, as it should, but can also truncate both the length and the severity of the journey by dramatically lowering the risk-free rate of return on cash, while making the stuff very, very abundant.

By doing so, the Fed will lift the intrinsic value of all assets versus what otherwise would be the case, as well as spark animal-spirited buying interest in all assets once they fall below intrinsic value.

BB: Sounds sensible, so we should expect the Fed to do that, right? And what about fiscal policy? Is there a truncate-the-journey role for that policy tool as well?

PM: Spot on regarding the Fed: look for rate cuts at every FOMC meeting for the next two to three quarters, taking the Fed funds rate down to at least three percent, and quite possibly lower. As regards fiscal policy, I could conceive of a number of useful measures, though nobody in Washington or the campaign trail has asked me.

But as a practical matter, I seriously doubt that any useful fiscal policy measures will be implemented, as the political climate in an election year is all about pointing fingers of blame, rather than joining hands in constructive problem solving.

BB: So, will the US of A avoid a recession?

PM: If I'm right on the Fed, I think so. If not, then get ready for your first recession, Princess. Indeed, my partner Bill Gross thinks we've already entered one. He's always bolder in forecasting than I am.

BB: That's why he's the boss, Mac, anyway, I trust in Gentle Ben, as Morgan le Fay nicknamed him long ago. As regards to Hankering Hank, I'm agnostic. He does not own a printing press for legal tender, otherwise known as cash, as printed on the green paper in your pocket that says, *"This note is legal tender* for all debts, *public and private."*

So while I know he's a big cheese, or putatively or presumed to be a big cheese in Washington, I consider him a damp squib, as our English colleagues say. Ben's the Man.

PM: Where did you, Bun, learn such cynicism?

BB: From you, Mac. Don't act so darn innocent! You, yourself openly acknowledge that fiscal policy makers are blind, impotent, or both. So don't bust my chops, OK?

PM: Touché. Touché! Can we wind up this conversation on a warm note?

BB: Not before you own up to the four predictions you made a year ago with Morgan le Fay. By the way, I love that you love her, still. And that you love me now. But could you move the urn with her ashes into another room?

For reasons that I can't rationally explain, having them here within my eyesight bothers me.

PM: Done. I'm sorry, Bun Bun, for my lack of sensitivity. Hiding nothing from you, here were the four predictions that she and I made last year:

- The U.S. will experience a soft landing, as will the world, with the runway lubricated by Fed easing.
- The U.S. yield curve will undergo bullish re-steepening, once the Fed gets on with easing.
- The U.S. dollar is likely to be soggy, but not precipitously so, as the rest of the world doesn't want to see their currencies soar versus the dollar, implying that monetary tightening outside the United States is likely to draw to a close, once the Fed starts easing.
- Stocks will do fine in the New Year.

BB: Not bad, Mac, not bad at all. Do I get to make some predictions for 2008?

PM: No, Princess, I'm not in that state of mind. Whatever I say becomes a noose 'round my neck, so I don't want to get into the explicit prediction business, as I have in recent years.

BB: Wimp. Wimp! Are you a man or a mouse, squeak up!

PM: Enough of the sass, Bun Bun. Enough! Don't need anymore of it. But in the spirit of the season, I will give you the last word, as I did Morgan le Fay. I can still love her and miss her, without showing disrespect to you. Don't you get that?

BB: Yes, I get it, even though I don't like it. But that is my problem, not yours.

PM: Thank you, Sweetheart. Let's end with my — and Morgan's, I confess — favourite prayer.

BB: Thank you. And I mean that! To all:

May God bless you and keep you,
May God's face shine upon you
and be gracious to you,
May God lift up his countenance
upon you,
And give you peace.

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[1] *Global Central Bank Focus titled "Plankton Theory Meets Minsky." http://europe.pimco.com/LeftNav/Featured+Market+Commentary/FF/2007/GCBF+3-07.htm*

[2] *http://www.federalreserve.gov/boarddocs/speeches/2002/20021015/default.htm*

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