Abstract: This paper identifies three ‘folk’ arguments for an intrinsic value implicit in the finance literature. The ‘hindsight’ argument states that if financial assets eventually have a value in the form of realised cash flows, then this reveals an intrinsic value that was always there. The ‘Goldilocks’ argument states that if there are values that are clearly too high and too low, there must be an intrinsic value between the two that is just right. The ‘time-will-tell’ argument states that however unstable prices may be in the short-run, in the long-run we can infer an intrinsic value beneath them.

Keywords: intrinsic value; paradox; valuation; philosophy; behavioural finance; art market.


Biographical notes: Elton G. McGoun is the William H. Dunkak Professor of Finance at Bucknell University and a Visiting Professor at the University of Ljubljana. His interests are in the history and philosophy of finance and finance as a sociocultural phenomenon. He has published a number of scholarly papers on these subjects and co-authored two books, Towards Finance with Meaning (JAI Press, 1996) and From Individualism to the Individual (Ashgate Publishing, 2002). He has also co-organised a series of nine conferences on Alternative Perspectives on Finance.

1 Introduction

Valuation is certainly a, and perhaps even the, central task of finance (Ross, 2002). The normative valuation models which have occupied finance research for as long as it has been undertaken tell us what the financial assets are supposed to be worth; that is, what their prices are supposed to be. Another, more personal, way to put this is that valuation models tell us the price that both the average buyer and the average seller would feel to be ‘fair’, a term used by Baker (1984). That is, neither the buyer nor the seller would feel as if they were getting a ‘good deal’, but neither of them would feel as if they were getting a ‘bad deal’ either. In earlier times, such a fair price might have been termed the ‘just price’ or the ‘right price’.

Copyright © 2007 Inderscience Enterprises Ltd.
These ‘correct’ values have appeared under a number of terms in the finance literature; ‘fundamental’ value (Tobin, 1984), and ‘economic’ value and ‘true investment’ value (Shiller, 1989), among them. Most recently ‘intrinsic’ value seems to be the preferred term. Explicit in the term ‘intrinsic’ value is that financial assets have a value not only independent of the specific buyer and seller in an exchange, but also independent of the exchange itself. The value lies in the asset and is not a consequence of what happens to it on a market. The market price may from time to time happen to be what the price is supposed to be, but what the price is supposed to be is not a market price. Essentially, ‘intrinsic value’ means that it is possible for something to be ‘mispriced’.

Because at least some of the independent variables in valuation models are prices and returns, we might say that the models are supposed to tell us not what the prices for financial assets are supposed to be but what prices are consistent with, what the prices of other assets were, are, and will be. Another way to put it is that financial assets are priced to yield a return consistent with the returns of other financial assets. The terms ‘fair’ value, ‘fundamental’ value, ‘economic’ value and ‘true investment’ value express this consistency (‘fair’) with other, more essential (‘fundamental’) prices in the economy (‘economic’) over the long term (‘true investment’). Financial assets have a value independent of the specific buyer and seller in an exchange, but still dependent upon exchange. What their prices are supposed to be are not themselves market prices, but they are still functions of other market prices within a diachronic (multi-period) equilibrium. The word ‘intrinsic’, however, clearly implies that the intrinsic value is what a price is supposed to be in some absolute sense and not just some relative sense.

The other market prices with which financial asset prices must be consistent include not only other financial asset prices in the financial economy, but also real asset prices in the real economy. One factor that has traditionally distinguished financial assets from real assets is that the former have only an ‘exchange’ value whereas the latter also have a ‘use’ value. The terms ‘fair’ value, ‘fundamental’ value, ‘economic’ value and ‘true investment’ value all embrace the real economy along with the financial economy. It is the inclusion of real assets having use value that prevents the valuation models for financial assets from being entirely self-referential. If what the prices of financial assets are supposed to be must be consistent with what the prices of real assets are, then financial assets must have an ‘intrinsic’ value that is as real as the ‘use’ value of real assets.

‘Use’ values are ‘intrinsic’ values in the complete sense of the term; that is, not just exchange values but ‘fair’ values, ‘fundamental’ values, ‘economic’ values, and ‘true investment’ values. If real assets have ‘use’ values, then it is certainly logical that financial assets, which are directly or indirectly claims on real assets, should also have ‘fair’ values, ‘fundamental’ values, ‘economic’ values, ‘true investment’ values and ‘intrinsic’ values. In contemporary finance, however, the use value of real assets is certainly not Marx’s value of the labour with which they were produced, a definition by which the use value might then be objectively measured, albeit via a market value for labour. Rather, the use value of real assets is their utility, and utility is a notoriously subjective, unmeasurable property. So this logical argument for an intrinsic value of financial assets that is indeed ‘intrinsic’ does not require that this intrinsic value be measurable.
This poses a critical conundrum for finance. There must be a common sense rationale for the existence of objective, measurable intrinsic values to justify the search for valuation models. If we did not believe that they existed, we would not search for them. We would not call financial assets ‘overvalued’ or ‘undervalued’. And if the argument for the existence of such values did not make a powerful appeal to common sense, we would not sufficiently believe that they existed. Recall the aphorism ‘Samuelson’s Razor’, which Samuelson (1963a) once directed to a prior generation of economists, that all economic regularities that have no common sense core that you can explain to your wife will soon fail (Samuelson, 1963a).

This paper explains and critiques three ‘folk’ arguments which we tacitly use to justify our belief in the intrinsic value of financial assets and our subsequent search for them: the ‘hindsight’ argument (Section 2), the ‘Goldilocks’ argument (Section 3), and the ‘time-will-tell’ argument (Section 4). We conclude in Section 5 that there are no intrinsic values in financial markets. Prices are driven by psychological and social-cultural factors. The search for valuation models to tell us the correct price of financial assets is not a scientific quest. That we are engaged in such pursuits is itself another consequence of the psychological and socio-cultural environment in which financial markets function.

2 The ‘hindsight’ argument

According to discounted cash flow valuation models, the value of a financial asset depends upon the future periodic cash flows and terminal cash flows (upon the maturity or sale of the asset or the acquisition or liquidation of the issuer of the asset) to which the owner of the financial asset is entitled. The intrinsic value is the sum of the values of these future cash flows discounted to the present. It makes perfect common sense that if these future cash flows exist – and they will exist, even though their actual values may turn out to be zero – then an intrinsic value also exists. We may never know what the intrinsic value is, because the future cash flows are necessarily uncertain, but in time we will know what those future cash flows will turn out to be, and we will then know what the intrinsic value was. Shiller (1989) uses the term ‘ex-post’ value to refer to the past value that ought-to-have-been based upon the full knowledge that will become available in the future. We might refer to this as the ‘hindsight argument’ for an intrinsic value.

At what rate, though, must we discount the cash flows to compute the past intrinsic value? This rate is often conceptualised as the sum of a riskless rate incorporating a real rate and an inflation premium – the appropriate rate of return if the future cash flows had been certain – and a risk premium to compensate for their uncertainty. Unfortunately, we can only know the risk premium if we know the uncertainty, which, looking forward from the present to the future is some function of what different values the cash flows might be. Looking backward from the present to the past, as we are when we compute what the intrinsic value was, we can only know what the cash flows were. There is no such thing as what cash flows might have been but were not.

For there to be a real, ‘intrinsic’ value requires there to be real cash flows and a real discount rate, which in turn requires real uncertainty. Looking forward from the present, there is only the uncertainty. Looking backward from the future, there are only the cash flows. This is not just a matter of what we know; this is quite literally a matter of what is
and is not real. The point in the future at which the cash flows appear and become real is the same point at which the uncertainty disappears and is no longer real. There is never an intrinsic value, which requires both to be real at the same time.

A permanent, real uncertainty might lead us around this apparent impasse, and it is the path implicit in the finance literature. There is a permanent uncertainty if what has happened in the past is what could happen in the future. We imagine that the values of past, present and future cash flows are all drawn from a Platonic well of cash flow values, and if the contents of the well are constant, then what has been drawn in the past is a reliable indication of what could be drawn in the future. In the language of mathematics, the uncertainty is represented by the relative frequency probabilities of the cash flows, which historical relative frequencies are real and which we can know.

According to Knight (1921), this process transforms unmeasurable uncertainty into measurable risk. These relative frequency probabilities are expressions of the classical probabilities resident in the well of cash flows, which we can not know but which we believe are there. Looking back from the future to compute the intrinsic value, the uncertainty with which we had viewed the future from the past was, and once again and always can be, obtained from the past’s past. What we thought might happen in the future, and what indeed might have happened in the future, is the same as what had happened in the past. This permanent uncertainty is always real, but of course it is only as real as the Platonic well of cash flows. And this analogy with a Platonic well does not address how uncertainty changes over time. One hour before a cash flow is scheduled to occur, we can be far more certain about the amount than we were one year before.

This suggests the question of how we identify these wells, if there even are wells. The simplest assumption is that there is one well per investment. But is the Microsoft well independent of the Intel well or are both Microsoft and Intel from the technology stock aquifer? Are the Microsoft and Intel wells and the technology stock aquifer of 2004 the same as those of 1994 or 1984? In the language of mathematics, what are the correct reference classes, the wells and/or aquifers from which past cash flows were drawn, that we should be using to obtain the relative frequency probabilities? What are the correct reference classes from which future cash flows will be drawn?

What about the other piece of the discount rate, the riskless rate? No investment is riskless, of course, but there are some investments that have historically delivered cash flows as promised. The reference class problems with a riskless rate are the same as described above. Here, though, they are not as serious and perhaps easier to see. Does having the same nominal issuer, the US Government for example, justify our placing a current investment promising future cash flows, a Treasury bond issued in 2004 that will mature in 2014, into the same reference class as a historical investment, a Treasury bond issued in 1984 that matured in 1994 and that delivered its promised class flows? And what is permanent about that current issuer, the US Government in 2004, that justifies our equating it with that past issuer, the US Government in 1984? Although the obvious answer to this question is that it makes sense to view the two bonds as equally safe, the answer to the question whether 1884 US Government Treasury bonds are the appropriate reference class for 2004 US Government Treasury bonds is not so obvious, and the answer to the question whether 1784 US Government Treasury bonds are the appropriate reference class for 2004 US Government Treasury bonds is obviously no. If not, when did the change from inappropriate to appropriate occur?
Almost nothing about the past is permanent, yet almost nothing about the present is wholly unprecedented. That there are precedents gives us hope for an intrinsic value, but what dashes it is that there is nothing permanent guaranteeing what those precedents are. Past cash flows can be assembled into an infinite number of synchronic (wells and aquifers) and diachronic (time periods) reference classes. And these are the infinite number of reference classes from which we must choose the one from which we will form our expectation of the future.

The constructed past, upon which we base our expectations, and the imagined future, which we expect, can exist only in the present. Only in the now can we construct the past or imagine the future, and there are powerful, if not dominant, psychological and socio-cultural elements in both construction and imagination. There are neither ‘definitive’ historical records, from which we might obtain uncertainty, nor ‘rational’ future expectations, from which we might obtain cash flows. There are no Platonic wells which we can rely upon never to change. Looking back from the future, we can not know from what reference class we did obtain expected cash flows and their uncertainties. We can not know from what reference class we should have obtained them. Reference classes are social constructions of the present and do not even exist in the past.

There is one remaining concern with the hindsight argument. If there is real risk, it must be transformed into a market risk premium. If there is a real riskless rate, it must be a market rate. We can not say whether these rates are real or not. They are as real as the rates in the real economy can be, which is as real as we are going to get. Although these market rates obviously reside outside individual financial assets, that they are an essential component of value does not seem to impair the concept of ‘intrinsic’ value. Our sense of the concept accepts that value can still be contingent on conditions in the external economic environment and still be ‘intrinsic’. What makes these market rates problematic is that they are aggregates made up of something from all of the individual financial and real assets in the economy. They do not reside completely outside individual financial assets; rather, a small piece of every market rate comes from within the individual financial asset it is used to value. While this piece may be so tiny as to be insignificant, it does raise the questions of when something moves from internal to external and from significant to insignificant.

The hindsight argument makes a very powerful appeal to common sense. Because an investment will deliver real cash flows in the future, we believe that those cash flows have in some sense always resided within the investment, giving it an intrinsic value. While the amount of those cash flows may indeed reside within the investment, their values can not. Value can only exist upon delivery of those cash flows, when their value is what they are, or exist upon expected delivery of those cash flows, when their value is a function of the discount rate. The discount rate, however, can not reside within the investment. There is a clear analogy between intrinsic value and Schrödinger’s famous cat. Although based upon our experience with cats and boxes, we believe that Schrödinger’s cat must be either alive or dead inside the box before we open it; the truth is that the cat is neither alive nor dead until we open it. Financial assets can have no value until they are exchanged. They can certainly have an ‘expected’ value; in fact, they would never be exchanged without one. But there is no value that is intrinsic, existing prior to exchange.
3 The ‘Goldilocks’ argument

Recall the fairy tale “Goldilocks and the Three Bears”, in which between too hot and too cold, too large and too small and too hard and too soft, there is always a ‘just right’. For every financial asset we can always imagine a price that will forever be too low and a price that will forever be too high relative to the size of the economy in which that asset would hypothetically be traded. Below the price that is too low everyone would always agree that the investment is a great deal and always be willing to purchase it, and just above it at least one person sometimes would not. Above the price that is too high everyone would always agree that the investment is a terrible deal and never be willing to purchase it, and just below it at least one person sometimes would. If there is a price that is absolutely too low and a price that is absolutely too high, common sense tells us that there must be always be some price that is absolutely just right. This is the intrinsic value.

It does not matter what the values are that are too high and too low. That the specific amounts that are too high and too low is socially determined does not mean that the existence of amounts that are too high and too low is. We might even say that these amounts that are too high and too low reflect a social consensus of what intrinsic value definitely can not be and what intrinsic value definitely must be less than and more than. In order to get from too high to too low, however, whatever those amounts might be, the value has to pass through the intrinsic value that is just right.

Consider what happens to price. We believe that everyone has just one price for an investment. Every price above this price is too high, and every price below this price is too low – for them. Although this price may not be stable for more than an instant, there is no reason to believe that it does not exist. The intrinsic value on the market level is the price at which everyone who believes it to be too high would not be willing to own the investment and everyone who believes it to be too low would be willing to own it. ‘Everyone’ means every person who might ever consider the investment possessing every piece of information that might ever bear upon the value of that investment, including the thought processes of every other person. Using just the condition ‘willing’ rather than the more common conjunctive condition ‘willing and able’ removes the calculation from the realm of actual exchange and accommodates the problem of limited supply. There is no reason that the intrinsic value has anything to do with an actual market-clearing price. The intrinsic value so defined may not be stable for more than an instant and never has to be achievable in practice, but there is no reason to believe that it does not exist.

Or is there? It is another economic commonplace that prices demand a numeraire; that is, all prices are expressed in terms of a reference commodity and are thereby relative to each other. The price that someone is willing to pay can not be dissociated from the prices of everything else, including the prices of that person’s own past, present, and future participation in the economy; that is, their past, present, and future income and wealth. It simply is not possible to dissociate willing from able. No one can name a price without considering how much they have and what the alternatives are. Just right can not exist without the too hot and too cold, too large and too small, and too hard and too soft, to put it in context. It can not be intrinsic.

Nonetheless, the Goldilocks argument is still a compelling one. In finance, it is often explicitly used to defend there being an optimal capital structure between too little debt (0%) and too much debt (100%). It does not matter that the intrinsic values for financial assets may never be sufficiently stable to ever know what they are. All that matters is that
there are intrinsic values. Since there is always a too high and a too low, there must always be a just right, and as long as there is a just right, it makes sense to try to know, even if only approximately, what it is.

The Goldilocks argument is much more difficult to refute than the hindsight argument. Let us cast the argument in more specific terms. To each value that a variable \(X\) may take on, we assign a quantitative judgement \(Y\) of degree; that is, lowness/highness. If lowness is negative and highness is positive, then zero is just right. If \(X\) takes on a value for which \(Y < 0\), then as \(X\) increases to a value for which \(Y > 0\), \(X\) must take on a value for which \(Y = 0\) if \(Y\) is a continuous function of \(X\). There is no reason, however, that there must be a single value of \(X\) for which \(Y = 0\). When the Goldilocks argument is used with respect to an optimal capital structure, it is generally acknowledged that shareholder value may be identical, and at a maximum, for many different capital structures. The argument is consistent with there being many intrinsic values. Our common sense, however, accepts that finding a range of optimal capital structures or a range of ‘intrinsic values’ is as worthy a pursuit as finding a single optimal capital structure or a single intrinsic value.

Of course the key assumption is that \(Y\) (degree) is a continuous function of \(X\) (value). Continuous functions are certainly intuitively appealing, as many things in our world appear to behave that way. But many do not. The problem with the Goldilocks argument is that \(Y\) is quasi-qualitative. It is not a function of \(X\) in the mathematical sense of the term, although it is a function of \(X\) in the sense of being a consequence of \(X\). As such, it presents a sorites paradox.

Soros is Greek for ‘heap’, and a compact formulation of the heap paradox is:

- a pile of 10,000 grains is a heap
- for any number \(n > 1\), if a pile of \(n\) grains is a heap then so is a pile of \(n - 1\) grains
- so one grain is a heap (Clark, 2002, p.70).

A chain like this, of successive applications of modus ponens (if \(p\) then \(q\); \(p\); so \(q\)), in which the conclusion of one argument (\(q\)) is a premise (\(p\)) for the next is known as a ‘sorites’ (Clark, 2002).

The sorites paradox of the Goldilocks argument more closely resembles Wang’s paradox, which is largely an inversion of the heap paradox.

- 0 is small
- if \(n\) is small, then so is \(n + 1\)
- so every number is small (Clark 2002, p.211).

If we begin with a value that is too small, we must logically conclude that every other value is too small. If we begin with a value that is too large, we must logically conclude that every other value is too large.

What is happening in a sorites paradox is that each successive application of modus ponens becomes slightly less justifiable; that is, every pile is slightly less of a heap than the preceding pile, and every number is slightly less of a small number than the preceding number. But there is no definite point at which a heap ceases to be a heap or a small number ceases to be a small number. The changes just gradually accumulate as it becomes less and less likely that the heap is a heap and the small number is a small number. While there may be a value that is too low and one that is too high, this does not
mean that there is one value between the two that is just right. The description ‘too low’
very gradually becomes less and less true and the description ‘too high’ becomes more
and more true. To attempt to salvage the point of just right, by defining it as the point at
which too low and too high are equally likely to be true for example, simply kicks the
paradox up to the next higher level where it is necessary to determine where certainty
ends and (arbitrary) probabilities must be assigned. There are philosophers who maintain
that there is indeed a point at which too low becomes too high but that we can not know
what it is (Sorensen, 2001). There is no logical support for this belief, and it leaves us
with the unsatisfying conclusion of our belief in an intrinsic value being sustained by a
belief that there must be an intrinsic value.

There has been a more familiar appearance of a sorites paradox in finance.
A common paradox of investments is that one which might be too risky, however high
the expected return, to make for one year, might still be very attractive to make
repeatedly for many years, because it would become increasingly likely to earn the high
expected return on average. Samuelson claimed to have done away with the paradox, and
his solution has been frequently quoted since. He told the story of a colleague who would
not accept a single bet (in which the colleague would win $200 but lose only $100 on a
coin toss), but would accept a series of such bets. Samuelson’s response to this was

“If you will not accept one toss, you cannot accept two - since the latter could
be thought of as consisting of the (unwise) decision to accept one plus the open
decision to accept a second. Even if you were stuck with the first outcome,
you would cut your further (utility) losses and refuse the terminal throw.
By extending the reasoning from 2 to 3 = 2 + 1, …, and from \( n - 1 \) to \( n \), we rule
out any sequence at all.” (Samuelson, 1963b)

Far from solving a finance paradox, however, Samuelson was the victim of his own
sorites paradox.

From psychological studies, we know that the labels ‘small’ and ‘large’ are
frame-dependent; that is, they are not absolute but depend upon some referential
structure. This was implicit in our initial definition of values that are too high and too low
being socially constructed. The problem is that the entire scale of value, not just the ends,
is socially constructed. What is ‘high’ and ‘low’ in the middle depends on the frame of
where we have been and where we are going and why we are there. It is not that there
are several possible intrinsic values, there is simply no such thing as intrinsic value.
Any value that might pass for just right does not do so because of something inherent in
the investment. It does so only because market participants might have made it just right.

4 The ‘time-will-tell’ argument

In financial markets, we encounter a reversion to the mean. This means that in the
long-run, despite the vicissitudes of market prices, there is some sort of convergence.
Intrinsic value emerges over time as the value that prices move towards or at least
around. This is the ‘time-will-tell’ argument, which has been around for many years.
Regnault (1863) wrote that the value of a security tended toward ‘the absolute price’,
which was approximated by the statistical median price (Preda, 2004).
Certainly when given a series of prices, we can apply an impressive assortment of statistical procedures to compute an ‘average’ or a ‘trend’ or a ‘process’. There is no question that following the procedures, we will obtain an ‘average’ or a ‘trend’ or a ‘process’. But is what we obtain really there or is it no more than the outcome of the procedure we apply to the series? Of course there are statistical procedures that are supposed determine the likelihood that that the series of prices is random, embodying no meaningful ‘average’ or ‘trend’ or ‘process’ and of course they are joint tests of the series of prices and the power of our tests. The real issue is whether the ‘average’ or ‘trend’ or ‘process’ is real. Suppose we determine that financial asset prices have a stable average, whatever time period we use to make the computation. Is it an intrinsic value? Certainly it may be, but it may exist only because of our belief in it as a self-fulfilling prophesy. Whatever average begins to emerge, for whatever reason, becomes the average that endures. It is hardly an intrinsic value; rather, it is a consequence of historical exchange values that comes to determine future exchange values.

Here, art markets can illuminate financial markets. Consider the following statement reflecting a belief in an intrinsic value of art:

“In the short run, then, the strategies of trading in art are not unlike those of trading in stocks. But in the stock market, when it comes to the long run, objective criteria become important; dividends more or less accurately reflect economic reality. In painting, judgment ceases to be subjective only in the very long run, where the judgment of history comes into play. In the interval between the short run and the very long run, art dealers are free to manipulate supply. The monopolist dealer can also manipulate prices to come extent, within limits set by overall demand.” (Moulin, 1987, p.156)

This quotation is a very succinct summary of the application of the time-will-tell argument in both markets, more specifically, stock markets and art markets. In the former, the emerging pattern of dividends reveals the intrinsic value of stocks. In the latter, the judgements of history reveal the intrinsic value of art. Although market makers can manipulate prices in the short run, this is an artificial social intervention that can not have a permanent effect. It may not be so easy, however, to see exactly what dividends and the judgement of history have in common. The art critic Roger Fry’s description of the participants in the art market suggests similarities with participants in financial markets that might justify the time-will-tell argument.

“Many great works begin at prices far below the levels that are justified by their merit, or, as Fry put it, the level that posterity would finally establish. Current prices for art are determined primarily by the demands from three groups: the masses of Philistines, who act unpredictably; the men of culture, who act with extreme caution; and the snobbists, who follow only the dictates of fashion. The last two look for guidance in their purchases from scholars and critics. Regrettably, the demands from true aesthetes, who respond to the merit of a work, are seldom strong enough to outweigh these other three sets of demanders. Those who wish to speculate on the art market, therefore, have necessarily to attend both to the erratic views of the Philistines and to the assessments of the scholars and critics whose judgments may or may not conform to the inherent artistic merit of the works. To the extent that critics are highly skilled and can ascertain merit quickly, the price of a work of art is likely to move swiftly to its long-run equilibrium.” (Goodwin, 1998, pp.52, 53)
There appears to be a parallel between Fry’s Philistines and ‘noise traders’, between men of culture (true aesthetes) and ‘true investors’, between snobbists and ‘speculators’ between art scholars and finance scholars, and between art critics and financial journalists. The true aesthetes/true investors can see the intrinsic value of art/financial assets, but their influence on the market is overwhelmed by Philistines/noise traders and snobbists/speculators. Sooner or later, the art scholars/finance scholars and art critics/financial journalists come to share the opinions of the true aesthetes/true investors. Through their influence on the snobbists/speculators, prices more accurately reflect the intrinsic value, although the presence of Philistines/noise traders prevents perfect convergence between market value and intrinsic value.

Fry is not clear about what is inherent in true aesthetes that scholars and critics can only come to acquire. How is it that true aesthetes are recognised as such, even by themselves? Is it that time will tell whose initial judgements regarding works of art prove prescient? This sounds very much like an application of a hindsight argument to the art world – that we will eventually know what the intrinsic value was when it is eventually revealed. Unfortunately, Fry’s characterisation sounds a little too much like wishful thinking. It is as if he wants to believe in an intrinsic aesthetic value of art that only a few sensitive true aesthetes can immediately recognise. The judgements and opinions of the Philistines and snobbists (condemned at the outset by the pejorative labels) and scholars and critics (condemned by their exclusion from the ranks of true aesthetes) are inferior.

At the heart of the time-will-tell argument, as Fry’s description of the art market brings out quite clearly, is that an intrinsic value is always there in the art or the financial asset. Someone, the true aesthete/true investor, may always know what it is, but it may take a long time for enough other market participants, the snobbists/speculators, to agree for the market price to reflect that intrinsic value. This is the one interpretation in which a mathematically-produced ‘average’ or ‘trend’ or ‘process’ could be said to be real. The only other interpretation is that eventually art markets and financial markets must stumble upon the intrinsic value, so what they stumble on in the form of an ‘average’ or ‘trend’ or ‘process’ must be the intrinsic value. This, however, is an empty tautology.

There is no question that time tells us something. More information, including more exchange values, emerges over time. We can not say that what the exchanges values converge to over time, if they do converge, is an intrinsic value that was there all the time. The convergence is a social process and the outcome is a social construction.

5 Conclusion

Finance scholars must believe in an intrinsic value of financial assets in order to justify their search for valuation models; in fact, the very term ‘intrinsic value’ in common use is evidence that there is such a belief. Finance practitioners must believe in an intrinsic value as evidenced by the common terms ‘over-valued’ and ‘under-valued’. But what underlies these beliefs other than the desire that there indeed be an intrinsic value? Is there a justification for them? This paper has identified three ‘folk’ arguments, or common sense arguments, in support of an intrinsic value. The ‘hindsight’ argument states that if financial assets eventually turn out to have a real, objective, measurable value in the form of cash flows, then this is a revelation of an intrinsic value that was always there. The ‘Goldilocks’ argument states that if there is a value that is clearly too
Intrinsic value in financial markets

high and a value that is clearly too low, there must be an intrinsic value between the two that is just right. And the ‘time-will-tell’ argument states that however unstable prices may be in the short-run, in the long-run we will see or, can at least infer, an intrinsic value beneath them.

Unfortunately for intrinsic value, all of these arguments require social processes, market exchanges among them, and social processes are incompatible with a truly ‘intrinsic’ value that is determined solely by the inherent attributes of the financial assets and not on what happens to them on markets. The ‘hindsight’ argument requires a discount rate based upon a market riskless rate and a market risk premium and a social assessment of risk. The ‘Goldilocks’ argument depends upon there being a value that is just right, which can only be the outcome of a historical trajectory and a social judgement. And the ‘time-will-tell’ argument depends upon a social inference of a foundation for market prices. There is no value for financial assets that can be described as intrinsic.

Of course there are always equilibrium prices; that is, a complete set of consistent prices that admit no arbitrage opportunities. And if this set of prices includes the prices of real assets, which might be said to have intrinsic values in the form of use values, then the consistent prices of financial assets are just as real and their values just as intrinsic. However, we are well beyond a belief in a ‘just price’ for real assets, and the utilities of real assets, our modern concept of their value, are unquestionably socially driven.

The quest for equilibrium prices may be a worthy task for finance research, and it could certainly be argued that that is what valuation models really are. The problem with equilibrium is that it is self-referential, and there is no justification for the belief that one has ever or could ever exist. Were the price of one asset to adjust to conform to the prices of all others, that adjustment would necessarily alter all of those others in unforeseeable ways. The concept of equilibrium just kicks the preceding arguments up one more level. If prices merely reflect ‘equilibrium’ values and not ‘intrinsic’ values, then we are faced with the same task of justifying our beliefs in an equilibrium that can somehow exist independent of our belief in it.

Another way of looking at intrinsic value vs. equilibrium value is in terms of the nature of truth. There are strong parallels between intrinsic value and a correspondence theory of truth, in which true statements correspond to what is out there, and between equilibrium value and a coherence theory of truth, in which true statements are consistent with each other. As the latter truth rests upon social consensus, we must consider the relevance of the political power struggles inherent in the achievement of any social consensus. In other words, the question of whether there is or is not an intrinsic value has implications beyond the finance research project. If there is an intrinsic value, then the market is a mutually beneficial competition in which everyone benefits from its revelation of the true price. If there is no intrinsic value, then the market price reflects the triumph of those having sufficient power to advance their interests at the expense of the interests of the others who are not as strong.

There can logically be no such thing as an intrinsic value, because value is necessarily a social construction. And the three arguments commonly used to justify the existence of an intrinsic value are faulty. These are not such nihilistic messages as they appear; they do not negate the achievements of financial economics over the past half-century or so. We now know that there is no such thing as the location of an electron, We can, however, make quite precise probabilistic statements about where an electron is likely to be. That there is no such thing as an intrinsic value does not mean that we can not make
meaningful probabilistic statements about what market values are likely to be or about the relative market values of different assets. That our models can not penetrate some ideal realm of Platonic values does not mean that they have not told us something useful about value in the world in which we live.

References


Notes

1 In his keynote address to an annual meeting of the European Finance Association, Ross (2002) described efficient markets and the theory of asset pricing as the ‘twin pillars’ of neoclassical finance.

2 It is more common to refer to valuation models as positive; that is, descriptive of how assets are actually priced. But positive models are built upon efficient market assumptions, thereby implying that markets are, or at least ought to be, efficient, as would be normatively prescribed. It is well-known that tests of valuation models necessarily simultaneously test market efficiency. If a test fails, it can be because of the model or because of the market.

3 I am indebted to Michael Johnson-Cramer for suggesting this point.