

## Cash Flow.

i. What is the return on a financial asset? The answer to this question has nothing to do with the value of an asset, and everything to do with the property of cash flow. Or more specifically, the value of an asset has everything to do with the property of cash flow.

Financial literature commonly includes in its definition of cash flow all dividends paid on stock shares; interest paid on any debt, such as coupon payments or principal repayment on discounted bonds; returns from the sale price of a financial asset or any other economic object relative to its purchase price –and especially the nominal return on an object relative to its real return, i.e. its basic, unadjusted, expected dollar return versus its dollar return adjusted for loss of purchasing power, and as a result of inflation, etc. For all that, the matter of cash flow is quite simple: ‘cash’, which materializes itself in an image of the value of an object, ‘flows’ from this image, through its object, and to a party holding the asset.

ii. The auxiliary and ultimately contingent physicality shared by so many assets obtaining the property of cash flow should not distract from its true materiality, or cause one to be misinformed about its basic material character. Cash flow has no necessary connection to any particular financial asset, but rather is a property whose determination is wholly predicated on the space of its transformation in the course of exchange. Habit and a deep-seated realist sentiment no doubt cause our expectation that where any phenomenon occurs, it is necessarily connected to or in some way derived from a physical object. But this naïve realism confuses the meaning of materiality, results in a bad ontology, and is the principal analytical culprit behind what we have elsewhere disparaged as ‘asset-fetishism’ (see *Of Synthetic Finance* (2013)).

Other than Deleuze, no one was more critical of the bad ontology resulting in asset-fetishism than Fischer Black, whose essay “Fundamentals of Liquidity” (1970) is to the ontology of finance what Black and Scholes’ “The Pricing Options and Corporate Liabilities” (1973) is to the epistemology of finance (though the former is obviously not as widely known as the latter). Herein, Black makes a series of what initially appear to be rather counterintuitive claims, but which contain many of the necessary preliminary observations to inaugurate a revision of the naïve realist political-economic concept of materiality.

Black commences his essay with the following assertion:

‘In a world of equilibrium, it simply does not make sense to think of liquidity as a [property] of an asset that affects its expected return. There is no trade-off between liquidity and return.’

A number of questions and concerns for the reader will immediately arise.

First, traditional methodological sentiments may incline us to wonder about the plausibility of the existence a ‘world of equilibrium’ –i.e. of why we should care about something that happens ‘in a world of equilibrium’? Or even accept that ‘in a world of equilibrium’ anything happens at all? Why does it matter, one will believe themselves to be critically inquiring, that it does or does not make sense to think of *liquidity*, let alone *any* property, as a that which affects the cash flow of an asset, when in actuality we inhabit no such ‘world of equilibrium’?

This may have once been a novel critique. But let us admit that today this contention a bit sophomoric –or at any rate has now become somewhat worn-out through empty repetitions and its stand-alone use by those who lack a willingness to require their imagination to envision what our world is capable of becoming, but which it currently *in fact* is not. (And how can we ever take our institutions further than they presently go, when our own creative engineering is unwilling to step foot down the path capable of being prepared by imagination?)

Secondly, and more profoundly, we are struck by the blatant contradiction between Black’s claim that there is no necessary connection between the property of liquidity and the cash flow of an asset, and traditional understandings of liquidity as precisely that property of an asset, market, or borrower which is intimately connected to cash flow. Is Black not making a wildly false claim when he says that liquidity and cash flow are unrelated? If cash flow has value, and maturity is the temporal realization of value in the periodic form of cash flow, how can liquidity and cash flow be unrelated? Black’s assertion does appear, at first glance, patently wrong.

It seems that a decision is required of the reader of “The Fundamentals of Liquidity”.

One reception to Black’s aforementioned assertion is to simply dispense with its possibility, outright. This is done either because we (a) assume that nothing actually happens in a world of equilibrium, since there is no world even capable of existing as such –which we apparently know with relative certainty if only because *it is a world which does not now exist*. Or we (b) notice the contradiction between our current understanding of liquidity, i.e. as a property which currently *does* have consequences for the realization of value, and in particular the value that actualizes in the form of cash flow, and which is ostensibly derived from an asset when that asset is transformed into the image of its value in the course of an exchange. And then this contradiction causes us to summarily reject the plausibility of Black’s assertion of the independence of cash flow from liquidity.

However, there is yet another way of reading Black’s assertion. If we are willing to temporarily indulge Black’s assertion about the possible achievement of a world of equilibrium, and if we are capable of projecting, along with Black, the material impact of synthetic exchange for the property of liquidity, we will see that Black is making a startling ontological forecast about the progressive differentiation of finance: namely, he’s observing that the trajectory of synthetic finance is an ontological movement towards hyperfungibility to the point of absolute non-differentiation between financial assets and their liquidity –which, if universally extended, in turn would mean a perfectly hedged world of exchange, a ubiquitous and incessant reversibility to all financial assets, a radical loosening of all invariance requirements on their properties, and consequently the realization of a world of equilibrium.

In other words –and strange though it is to imagine– the extended logic of Black’s projection would result in actualization of a zero-arbitrage space of exchange, and therein an annihilation of the current pricing mechanism for financial assets. Indelicately put, this would signal the end of finance capitalism as we presently know it.

Black, of course, doesn’t come right out and say this, which is why we have not simply reproduced, absent any commentary, the essay in its entirety for our reader. Rather, it’s necessary to take up the task of unearthing the full consequences of his analysis herein. Let us consider the essential features of Black’s 9-page essay in order to see how he arrives at this implicit conclusion.

iii. First, it is important to observe that Black understands, as we do, that there are different classes of exchange, which determine the properties of an asset; and that this means that different kinds of assets are groupable under different classes of exchange.

Black delineates three classes of exchange. Let us consider them below.

### ***Classical Exchange***

Historically, the earliest form of money-mediated exchange was *classical exchange*: this involves the exchange and immediate settlement of physical assets for their images of value (in as money).

Real assets can include any economic object with physical materiality, and whose quality and character of physicality is informative of its value (e.g. houses, horses, cars, and corn).

Because the time-horizon on the property of tenure of a classical exchange was and is restricted to immediate settlement, and while certainly not wholly exempt of varieties or kinds of risk (fraud, etc.), the cash flow connected to classical exchange is relatively unaffected by much volatility, for the image of value of the asset has little opportunity to depreciate over the course of the exchange. This is a way of saying that volatility is, if present at all as a property of a classical object, is only ever present in limited quantities.

Also, already in classical exchange there is *some, albeit comparatively little fungibility* to the properties of its objects. Black observes, without mentioning by name, Marx's ontological division of the value of an asset into its use value and exchange value, to which we will return below. He says:

‘A real [*viz.* physical] asset has two functions: it acts as a store of wealth [i.e. realized as and in exchange value], and it is an object that has value in use [i.e. use value]. In theory, these two functions can be separated, as when one person owns an asset, and another person rents it for use.’<sup>1</sup>

The reason this is possible, i.e. the reason the asset can be intensively divided, or doubled, as having both a use value that is virtual and real, and an exchange value that is actual and real, is because the classical object, to begin with, is a natural object. The classical object in ‘its function’ as an exchange value is the product of a repetition of the natural object that yet produces a new difference in kind: the natural object is repeated, and in the process of its repetition, the classical object is actualized. This is thoroughly Deleuzian point, which is why it is interesting to see that Deleuze's heterodox political economy (founded on the dynamical and creative force of difference and repetition) is here repeated by Black, albeit differently.

### ***Generic Finance***

Contrary to fast and loose histories of debt, to begin with there was only classical exchange. Today, however, there is also *generic finance*, or generic financial transactions: this involves the exchange of generic financial assets (Black simply dubs them ‘financial assets’), and whose tenure is capable of having a number of time-horizons other than immediate settlement –which gives birth to the now differentiated property of maturity.

---

<sup>1</sup> Fischer Black, “The Fundamentals of Liquidity” pg. 1

Like the reference classical objects make to natural objects, generic financial assets will often reference an economic object with physical materiality, and whose quality and character of physicality is usually if not always informative of its value (e.g. houses, horses, cars, and corn). But generic financial assets are non-physical economic objects, and whose quality and character of physicality will not be informative of its value (e.g. loans, bonds, bills, and stock). For this reason we can see and say that the class of exchange of generic finance already includes within it the class of exchange of classical exchange. That is to say, *historically* classical exchange precedes generic finance, but *ontologically* generic finance is seen to be the broader class of exchange, and therefore more fundamental, more generalized, and more original than its historical predecessor—for it always includes the latter within itself, but never vice versa.

With the differentiation of the property of *maturity*, we see that in generic financial transactions the time-horizon of the tenure of the exchange is loosened beyond immediate settlement. But there is even more to it than this, for there are a number of important consequences that result for the other properties of the assets involved. First and foremost is that maturity and cash flow now no longer need to be organized in a linear manner. Indeed, it is important to take note of the subtle but radical alteration to the character of tenure ushered in by the historical arrival of generic finance, and which directly causes the property of maturity to differentiate itself from out of tenure. In classical exchange tenure was always only restricted to immediate settlement. But once the invariance requirement on the time-horizon of tenure is loosened, there is no longer any impediment to the properties of risk and cash flow from coming and going, or growing or shrinking—and so also there is no exogenous obstruction to their non-linear arrangement in the space of exchange.

It is precisely this new fungible character of maturity, and its subsequent ability to establish a non-linear relationship with cash flow, which allows Black to make the following observation:

‘The fact that liquidity should not affect the return on investment in real assets becomes...clear when we consider the relation between the purchase or sale of an asset and the cash flow connected with the purchase or sale.

‘*There is virtually no relationship* between the legal transaction in which a buyer agrees to pay a certain amount to a seller, in return for an asset owned by the seller or services to be provided by the seller, and the settlement of the transaction in the form of one or more cash flows.’<sup>2</sup>

For this reason, Black then moves to observe, there is no endogenous constraint preventing, for instance, the seller of an asset from borrowing from another party the entirety of the cash flow he will receive from the sale of the asset *prior* to the commencement the sale itself. Or, the seller of the asset may choose to extend a line of credit to the buyer, and will thus receive periodic payments agreed-to under the terms established at the commencement of the sale. Therefore, the seller can receive the cash flow from the sale either prior to, periodically during, or sometime well-after the sale itself (i.e. ‘[b]oth buyer and seller can arrange to have the actual cash flows occur at convenient times that bear almost no relationship to the time of the sale’). And this is only possible because in a generic financial transaction, cash flow is no longer predicated on any

---

<sup>2</sup> Ibid pg. 3

causal relation to liquidity, since the property of cash flow and maturity need not be linearly organized.

Black then goes a step further. He points out that if it is the case that ‘both the buyer and seller can arrange for the cash flow to occur at a future time that is fixed in advance’, and if the result is that ‘both of them can know well in advance when the cash flow will occur’, then it is also the case that ‘neither [of them] has the problem of dealing with unexpected cash flows.’<sup>3</sup>

In other words, Black is asserting that the now non-linear fungibility of the property of cash flow, and its ability to be effectively isolated as a property, and then mutably transferred in both time and space, and independent of the physicality of the asset itself, means that risk should be equally isolable from the asset, and thus capable of being completely hedged away by distributing it across the entirety of the space-time of the exchange.

However, even the least critically-minded amongst us must give pause here. We know things are not as simple as this. In fact, not only is it the case that rarely, if at all, is any generic financial transaction free of risk, it turns out that even the ‘risk free rate of return’ is not a rate of return that is free of risk. Not only is it not the case that risk hasn’t been eliminated or reduced in generic financial transactions, it is more than ever the case that any generic financial transaction is always permeated through and through with often hidden and unexpected risks. And not only is cash flow in generic finance not immune to the risk embedded in maturity, rather it seems that cash flow is more so exposed to volatility than ever before.

And why? In short, simply because when the tenure of an exchange is extended beyond immediate settlement, the augmentation and differentiation of new kinds of risk now accompanying maturity are free to proliferate, and the image of value of the object now has all the opportunity to randomly fluctuate over the newly-extended time-horizon –which is an opportunity that in classical exchange it had previously lacked. Generic finance thus potentially has all the new risks that differentiate along with the property of maturity, e.g. wild fluctuations in the image of value, payment default risk, volatility risk, interest rate risk, inflation risk, currency risk, etc., yet with none of the prior certainty accompanying the strict invariance requirements governing classical exchange.

### ***Synthetic Finance***

How, then, does Black resolve his forecast for a world of equilibrium –in which the property of liquidity is unrelated to the property of cash flow– given the apparent tendency of these new risks accompanying the property of maturity in generic financial transactions to now differentiate themselves, proliferate freely and en masse, and all its concrete consequences for a depreciation in the image of value of the object and volatility of cash flow?

Black addresses this issue by making an ontological observation about financial assets. Moreover, it’s an observation about another kind of exchange whose ontological possibility is both peculiar and peculiar to finance, and in a very real historical sense is already embedded in exchange from the very beginning:

‘Like a real asset, a financial asset may have more than one function. In addition to serving as a store of wealth, a financial asset makes it possible to transfer risk from one person to another, and may make it possible for speculators to make “bets” on the fortune of a particular company.’

---

<sup>3</sup> Ibid pg. 3-4

But again, Black notes, just as with Marx's ontological division of the value of a physical asset into its use value and exchange value [*viz.* store of wealth], so too is the liquidity embedded in the exchange value of a financial asset ontologically isolable from its risk. As Black notes:

‘[T]hese [two] functions are separable. There is no reason why the person who supplies the money for a financial asset should take the risk associated with the asset. And the risk can be transferred from one person to another independently of any transfer of the money invested from one person to another.’<sup>4</sup>

Black ostensibly cites as an example the generic financial asset of a long term corporate bond; but then he quickly twists the example over on to itself. Let us observe. He says:

‘There is no theoretical reason why a financial institution could not guarantee, for a fee, the payments of interest and principal on the bond. We would expect the fee to be related to the amount of market risk in the bond. Such a bond would then be, from an investor's point of view, virtually free of risk of default. The transfer of the bond would be completely independent of the transfer of the guarantee.’<sup>5</sup>

‘Similarly, there is no theoretical reason why a financial institution should not guarantee a long term bond against fluctuations in price. This would convert the long term bond into a short term bond, from the holder's point of view, and would separate the function of supplying the money from the function of bearing the risk of price fluctuations.’

Of course in the 1970's these ideas were unique. Today we recognize that an exchange involving the ‘guarantee, for a fee, the payments of interest’ on a bond, is executed by way of the subclass of credit derivatives of interest rate swap (IRS). Likewise, an exchange which involves the ‘guarantee, for a fee, the payments of...principal’ on a bond, is by way another subclass of credit derivatives, this time a credit default swap (CDS). And an exchange which involves the guarantee of a long term bond against fluctuations in price –and which converts this risk seemingly attached to the bond itself, now into an eliminable property– is executed through the subclass of credit derivatives of a total rate of return swap (TRS). In other words, Black is anticipating the proliferation of credit derivatives and various subclasses of such synthetic assets when forecasting *in particular* its concrete consequences for the relation between liquidity and cash flow, and *more generally* and by implication its extended effect on the pricing mechanism of finance capitalism.

Black further observes:

‘A second institution might take over the guarantee function from the first institution, without affecting the bond holder. And the holder of the bond could sell it to another holder without any change in the institution guaranteeing the bond.’

---

<sup>4</sup> Ibid pg. 4

<sup>5</sup> Ibid pg. 4

‘It is clear that the risk of default on the bond, and changes in the fortunes of the issuer, will affect the terms on which the guarantee can be transferred. If there is a dealer in guarantees, these factors may affect his spreads. But these factors will not affect the terms on which the bond itself can be transferred. Nor will they affect the spreads of bond dealers.’

Why will such factors neither affect the terms of transfer of the financial asset of the bond itself, nor the bid-ask spreads of the bond dealers –nor, for that matter, any operation costs which otherwise affect the amount of reversibility adhering to the generic financial asset of the long term bond over the course of the tenure of the exchange? *In short, simply because the cash flow is independent of the actuality of the generic asset itself.* ‘It is clear’, Black notes, that any material change to interest rates ‘*will affect* the terms on which the guarantee’ (i.e. the guarantee against the risk embedded in the maturity of the exchange) can be transferred –which is to say that the value, price, and cash flow connected to the synthetic asset itself *will be affected*. But that conversely, any material changes to interest rates *will not affect* the terms on which the generic financial asset of the bond itself is bought or sold.

And so the thought arises: if the price, value, and cash flow of the actuality of the generic asset (in this case, of the bond) *is materially unaffected*, but the price, value, and cash flow of the of the synthetic asset *is affected*, are we not unjustified to continue to assert that the former is in any important economic sense ‘more material’ than the latter? For it appears that in fact precisely the opposite is true.

Black observes the material consequences for the *divisibility* of such a financial asset.

‘Thus a long term corporate bond could actually be sold to three separate persons. One would supply the money for the bond; one would bear the interest rate risk; and one would bear the risk of default.’

Black observes the material consequences for the *reversibility* of such a financial asset.

‘The cost of transferring the bonds themselves, under these circumstances, would be nearly zero.’

And Black observes the material consequences for the *liquidity* and *cash flow* of such a financial asset, given that the *risk in maturity* is isolable and nomadic (or ‘transferable’ is how he puts it).

‘The two factors that are said to make an asset relatively illiquid, are risk and transfer costs. But we have seen that the risk of a financial asset is separable from the asset as a store of wealth, and that the transfer costs are associated with the risk of the asset rather than with the asset as a store of wealth.’

‘Thus liquidity in financial assets has nothing to do with cash flows. Cash transfers are completely independent of risk transfers, and liquidity, if it has any meaning at all, is associated with risk transfers rather than with cash transfers.’

iv. Black truly is, here, in 1970, anticipating the progressive fungibility of financial assets. But really, this simply scratches the hard shell of his analysis. He presumes that the economic properties of an asset constitute its dynamic and plastic essence, rather than that there is some kind of inherent ‘being’ to an asset, from which its properties derive their nature. This, of course, is what Deleuze, following Riemann, calls a ‘multiplicity’.

And Black is really just unearthing the material consequences of the fungible and nomadic character of economic properties: if moneyness, divisibility, reversibility, liquidity, maturity, risk, and cash flow are all isolable and not inherent to an asset, the first conclusion we should draw is that the extensive actuality of the asset doesn’t matter in the least, *materially* speaking. And secondly, we are then presented with a picture of, and must inquire into the significance of why financial assets, or rather their properties, are increasingly fungible?

What are the broader material consequences for our financial system as a whole, as it progressively differentiates into a class of exchange whose invariance requirements on the economic properties are becoming ever more so loosened, and in which the properties of assets are ever-more so nomadic, plastic, and now increasingly even hyperfungible?

Black provides us with one answer, when he foreshadows a post-capitalist ‘world of equilibrium:

‘[In such a world] a person or institution does not need to hold liquid assets to help handle unexpected cash flows. Almost all cash flows are expected, and the cost and risk associated with handling those cash flows that are unexpected are very low.’