The Materialism of Synthetic Finance: A Case Study on Credit Derivatives in Seven Notes
Essay Two Outline

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Note 1. Credit Default Swaps

i. When, as political economists, we encounter credit derivatives and other synthetic financial objects, we must not overlook that their progressive differentiation from generic finance signals an important phase transition in our dynamical system of economic institutions, with deep historical, materialist significance.

Brief consideration of the ontology of a single name credit default swap (CDS) already illustrates this truth.

A CDS is a bilateral exchange between two parties—one of whom is called the protection buyer, the other is called the protection seller. The terms of exchange of the CDS make reference to a certain notional value, which is the payment obligation of a reference entity. The protection buyer pays the protection seller a cash premium on a quarterly, annual, daily, or any other agreed-to periodic basis. In return, the seller agrees to make protection payment to the buyer upon occurrence of a credit event in the reference entity [fig.2.1]. The object of this exchange is therefore called a credit default swap because the parties to the exchange are swapping the risk of a default or some like credit event on a debt obligation.

Someone or something somewhere owes someone or something else money. This debt obligation comprises the reference obligation of the reference entity: there has been a preceding generic financial exchange of some generic financial asset (i.e. a mortgage, a bond, or some other debt or equity object), whose event risk and cash flow the CDS replicates. However, while the CDS makes reference to this generic financial asset, its value, and the single name of the obliger in the generic financial exchange, the parties to the CDS may be (and usually are) otherwise independent of and unrelated to the generic financial exchange. For this reason the exchange is ‘synthetic’. We call the exchange of credit derivatives—in this case the exchange of a CDS—a ‘synthetic financial exchange’ because the exchange involves a synthetic swapping of the risk and cash flow of a reference entity, derived from a generic financial exchange, but to which neither party to the synthetic exchange need be party to begin with.

ii. We have provided an elementary description of a single name CDS commonly found in any literature on credit derivatives, so let us consider its elementary material significance.

We have observed that this kind of exchange is called ‘synthetic’ insofar as neither party to the exchange is required to have original exposure in the generic financial exchange, whose asset comprises the reference obligation from which the synthetic financial exchange of the CDS is derived, and on which to begin with the entirety of the CDS transaction is ostensibly predicated. Therefore, when we speak of ‘synthetically replicating’ a generic financial asset, we should observe that the CDS is an economic object to be exchanged like any other, but only insofar as it is a process—a credit default swap is both an economic object (viz. a commoditized asset) and a process (viz. a technology) for the synthetic replication of a generic financial asset; and it is the constitutive process of the exchange that actualizes the synthetic asset, as such, rather than the exchange constituting an exchange of some pre-existing, pre-actualized asset.

However, unlike any other economic object, there is no inherent limitation on the ability to replicate and distribute such synthetic assets ad infinitum. Comparison with the other two classes of exchange quickly reveals why this is the case:

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In a classical exchange, which is comprised of physical objects, a specific coat needs a specific amount of cloth, whose quantitative availability places physical limitation on the number of coats in circulation.

So too in a generic financial exchange, which is comprised of generic financial assets, the financial asset of, for instance, a mortgage correlates to the physical object of the house; and the loan-to-value ratio of any mortgage is necessarily bound by its correlation to the house as a physical structure.

In a synthetic financial exchange, by contrast, it is enough that: (a) only one coat, or one house, or one mortgage exists; so that, (b) the economic properties of risk and cash flow otherwise linked to that asset (i.e. the one coat, one house, or one mortgage) can be synthetically replicated ad infinitum and ex nihilo; in order to (c) create a new asset in itself –which is the synthetic financial asset.

iii. When we say, then, that the parties to the CDS have ‘swapped’ the risk of default on the obligation of a reference entity, we are observing that they have synthetically exchanged a risk and cash flow otherwise adhering to a generic financial asset, i.e. as two economic properties otherwise attached to the referent. But let us keep in mind that prior to the exchange of the CDS, neither party to this synthetic exchange need be exposed to any risk or cash flow connected to the referent. We have observed that ownership-of, or exposure-to, the referent is not a requirement for transacting a synthetic financial exchange –which means that neither the protection seller nor protection buyer need be the obliger or creditor in the preexisting generic financial exchange. But to the extent that the protection buyer and seller transact a CDS, they have created a new asset, and this asset does have the very real material economic properties of risk and cash flow.

In this respect, we will observe that the act of synthetic exchange effectively creates – synthetically, yes, but no less in reality– a risk and cash flow which did not exist before. There is no transfer of private property, no concrete production by labor of any classical economic object, and whose intrinsic value is supposedly congealed therein, nor any new generic financial asset or reference obligation. And yet, through the process of synthetic exchange, because there has occurred a new and ex nihilo proliferation of the economic properties of risk and cash flow, we cannot meaningfully deny that a synthetic exchange is any less an exchange, or lacking in profound material consequences.

In fact, the peculiar materiality of the synthetic financial asset now raises the important question of whether it is the either the case that we need to liberalize our prior understanding of materiality, or even that the actualization of synthetic finance already radicalizes the very concept of materiality itself? This is an issue for further examination by our speculative materialism.
Note 2. Total Return Swaps

i. We commenced Note 1 by asserting that the progressive differentiation of synthetic finance from generic finance signals an important phase transition in our dynamical system of economic institutions, with deep historical, materialist significance. And we briefly considered the ontology of a single name credit default swap (CDS) to inaugurate our illustration of this truth. Another type of credit derivative called a total return swap (TRS) is more revelatory, still.

A TRS is a bilateral exchange between two parties—a protection buyer, who periodically transfers or ‘swaps’ the ‘actual returns’ from a reference asset or index of assets to a protection seller, who in return transfers the ‘total returns’ of some agreed-to amount, which is calculated at a certain spread over or below a benchmarked base rate of return.

On the one hand, the cash flow from the actual returns derives from its synthetic replication of the returns and current market value of a generic financial asset or index of assets: this includes replicating any discounts or coupons, and ongoing market appreciation/depreciation in the value of the generic referent. On the other hand, the cash flow from the total returns is tethered to a base rate—e.g. LIBOR + 70 bps—agreed to by the parties to the TRS ahead of time.² This means that the cash flows from the total returns and the actual returns are both derived from the returns and current market value of the same generic referent, since the total returns is a reflection of the spread between the actual returns, less the benchmarked base rate of return.

For example, if the parties to the contract agree that the base rate for the total returns is to be LIBOR + 70 bps, the protection buyer is agreeing to swap with the protection seller the actual returns from a generic reference asset or assets—e.g. a corporate bond, or index of corporate bonds—in return for LIBOR + 70 bps [fig. 2.2]. But if, for instance, there is any depreciation in the market value of the referent at some point during the tenure of the swap, the protection seller will transfer to the protection buyer the new difference between its actual returns and the total returns of the base rate spread [fig.2.1a]. Likewise, in the event of any appreciation in value of the generic asset, the protection buyer will increase the payment of actual returns to the protection seller to reflect this change as well [fig.2.2b].

For this reason, sometimes the protection buyer is more precisely called the ‘total return payer’, and the protection seller is called ‘the total return receiver’, since the intention of the parties to the exchange is not so much the buying and selling of protection on a credit event, but the swapping of total valuation risks and cash flows attached to the respective referent. The object of this exchange is therefore called a ‘total return swap’ because the parties to the exchange are swapping the total risks that determine the cash flow return on some generic financial asset or index of assets. And as with any credit derivative, the exchange is said to be ‘synthetic’ insofar as the exchange is synthetically replicating certain specified economic properties from its referent—and in the case of a TRS, these properties are the total risks and cash flow, reflected as the total returns and ongoing market value of the generic financial asset or assets.

ii. Brief comparison of the ontologies of a single-name CDS and a single-name TRS will yield more insight.

First, in a TRS, the parties swap cash flows on an ongoing basis, and constantly adjust the amount to reflect any change in returns or market valuation of the referent; whereas in a CDS the payoff for the buyer is contingent upon the occurrence of a credit event. While in both cases

² LIBOR (or London Interbank Offered Rate) is a globally-used primary benchmark for interest rates.
there is nothing to prevent the occurrence of credit event resulting in either cash or physical settlement and subsequent termination of the swap, it is worth observing that an adjustment in cash flow in the single-name CDS transaction is contingent upon a one-time credit event, while the TRS could be perpetually revalued an ongoing basis, but written to include credit events as well. In this respect, the TRS already points towards the development of a structured synthetic financial asset –such as a synthetic CDO– whose cash flow is interminable, perpetually adjusted on an ongoing basis, and wherein the cash flow actually is the asset, as such.

Secondly, while a single-name CDS replicates exposure to an individual and specific reference obligation from a generic financial exchange, and notably does so through the act of exchanging the risk of default or some like credit event; conversely a single-name TRS replicates an exposure to the total risks of an asset –including its default risk, interest rate risk, currency risk, etc.– and in this respect is considered a more comprehensive replication of the risks attaching to the generic referent. In fact, if the CDS’ definition of a credit event was broadened so as to include any incremental change in cash flow or mark-to-market valuation of its referent, and if the requirement to terminate the swap with occurrence of a credit event was simply dropped from the terms of the exchange (i.e. so that the swapped cash flow was interminable), all other superficial ontological differences between a CDS and TRS would collapse. This is obviously not the case. But it does give us some insight into the progressive fungibility of synthetic financial objects, which are otherwise lacking in either physical economic objects or in generic financial objects. And again, although we colloquially speak here of synthetic ‘objects’, let us observe that—as with a CDS, so too with a TRS— it is the process of the exchange itself which constitutes the asset, rather than the exchange constituting the process by which some preexisting assets are exchanged.

And so finally, let us once more observe that in both instances of synthetic financial exchange thus far considered, the physical property ostensibly tied to the generic referent remains unaffected and otherwise untransformed; ownership of any physical assets remains totally unchanged, and so on. And yet in a synthetic exchange, the important economic properties of risk and cash flow are capable of being created ex nihilo, and plastically redirected or otherwise redistributed. This plastic redistributive potential of credit derivatives is a topic for further investigation by our speculative materialism.

Note 3. Credit Derivatives
i. We have begun to see that credit derivatives are a type of synthetic financial object capable of creating or destroying, extracting or injecting, distributing and redistributing a variety of risks and cash flows. As such, they are also a process by which the economic properties of risk and cash flow are synthetically created or destroyed, extracted or injected, distributed and redistributed to the parties of the exchange.

The counterparty in a synthetic financial exchange could be specific market participants –such as a hedge fund, bank, pension fund, and so on; or through the process of structured finance could be the capital markets more broadly. However, there is no technical impediment to the counterparty either being the State, or even some instrument for universality which would render the State, as such, obsolete. In fact, the historical-materialist trajectory of synthetic finance points in this very direction.
The counterparty to the credit derivatives exchange is purchasing the properties of risk and its associated cash flow. In this respect, credit derivatives are a technology for exchanging the risk and cash flow attached to a generic financial asset, the latter of which in turn is in some way virtually connected to some physical object, or what we call a ‘classical object’ (e.g. as a house qua physical referent is to a mortgage qua generic financial referent, and so on). And yet we have repeatedly observed that, as with any synthetic exchange, all this occurs without actually exchanging either the generic financial asset or the classical object to which it is ostensibly linked, and which acts as the referent. It is therefore no overstatement to say that with advent credit derivatives we see the ruse of private property laid bare: if a cash flow is capable of being traded without the physicality of the asset changing parties, or being moved about in space or transformed whatsoever, it is because the intrinsic essence of any economic object is its economic properties, which are not essential or intrinsic to it. The truth of any exchange is its objectivity as capital, which only has material meaning when defined by its cash flow, and which means that the asset just ‘happens to be there’ as an extrinsic manifestation of the process of the exchange. Moreover, insofar as any economic object is its total set of economic properties, when such objects are in process by way of synthetic financial exchange their properties are mobile, plastic, and fungible, i.e. capable of being created or destroyed, extracted or injected, distributed and redistributed elsewhere.

For this reason, in Notes 1 and 2 we commenced our illustration that the progressive differentiation of synthetic finance from out of generic finance signals an important phase transition in our dynamical system of economic institutions, with deep historical, materialist significance. In large part, vindication of this assertion is predicated on the progressive fungibility of synthetic symmetry – whose ontological significance will demand a more in depth examination.

Presently, let us consider two elementary concrete examples, in order to solidify our foundational understanding of credit derivatives, as we begin to deepen our understanding of this aforementioned truth.

ii. Our first example is that of a single-name CDS.

Let us say that PB has purchased a senior secured bond issued by Marx Corp., whose notional value is $75 million, payable after 10 years. PB seeks to lessen, or hedge, its risk exposure to Marx Corp. (since PB has become increasingly aware that the latter has trouble completing projects). PB thus enters into a CDS with PS. The notional value of the CDS is $50 million, with Marx Corp. as the reference entity, and senior unsecured bonds as the reference obligation. The terms of the CDS contract obligate PB to pay a protection premium of 75 bps to PS over the tenure of the contract, which is five years. According to the terms agreed to in the contract, settlement may be physical delivery or in cash.

Let us consider some basic material features of the asset convoked into being by this synthetic financial exchange.

To begin with, we have stated at the outset that PB is transacting the CDS for hedging purposes, insofar as PB owns the reference asset – which is the generic financial asset of a senior secured bond of Marx Corp. But this need not have been the case; PB could have just as readily...
transacted the exact same swap without owning the debt obligation of the Marx Corp. bond, since the requirement placed by the other two classes of exchange (i.e. classical exchange and generic financial exchange) on the unity of risk and physical possession is altogether dropped from a synthetic financial exchange. That is to say –and importantly– there has still been an acknowledgement of commensurability, or equivalence, or symmetry between the synthetic object and its image of value as money –since symmetry is a necessary feature of any exchange, whether of classical objects, generic financial objects, or synthetic financial objects (indeed, lacking symmetry, no price will be agreed to, and no exchange will occur). And yet, we see that unlike in either a classical exchange or generic financial exchange, there is no necessary conjoining of actual risk exposure to a referent and ownership of that referent itself. For this reason, we will say that in a CDS –as in any synthetic financial exchange– there is no required collinearity of risk and physical ownership. This also gives further meaning to our earlier assertion that with the advent of credit derivatives we are either witnessing the progressive abolition of private property, or if it still has any relevance to this class of exchange at all, it should be exclusively defined by substance of its risk and cash flow.

Along this same line of thought, our careful reader will have also become aware that, in our example above, there are a number of other basic ontological differences between the generic financial asset (of the Marx Corp. bond) and that of the synthetic asset (of the CDS). For instance, the actual bond held by PS has a maturity of 10 years, its notional value is $75 million, and it is a senior secured bond. However, the tenure of the CDS has a maturity of 5 years, its notional value is $50 million, and its referent obligation is a senior unsecured bond. For this reason, we will observe that in synthetic financial exchange –in this case a CDS– a number of restrictions placed on the economic properties of the object in the other two classes of exchange are loosened or altogether dropped. We call these restrictions ‘invariance requirements’ –whose material significance we wish to examine in more depth. Incidentally, such loosened invariance requirements also illustrates for us both the progressive fungibility of synthetic finance over the two other classes of exchange, as well as its inherent capacity for more radical usages.

For example:

(a) As we observed above, there is no invariance requirement on collinearity of risk and exposure: e.g. the holder of the synthetically-replicated risk (and its cash flow) from the generic referent is not required to be an owner-of or otherwise exposed-to the generic referent.

(b) There is no invariance requirement on collinearity of tenures: e.g. the generic referent has a 10 year maturity, but its synthetic replica has a 5 year maturity.

(c) There is no invariance requirement on collinearity of notional values: e.g. the generic asset is for $75 million, and its referent obligation is a senior unsecured bond.

(d) There is no invariance requirement on collinearity ‘in-kind’: e.g. the generic financial asset is a senior secured bond, but the synthetically-replicated asset is a senior unsecured bond.

We must further determine the ontological significance of this, and what, if any, is the historical meaning of this progressive loosening of invariance requirements concomitant with the differentiation of synthetic finance as a class of exchange? However, for now, to begin with, it is enough that our reader recognizes that the required symmetry –i.e. between the economic object and its image of value as money– on which any act of exchange is predicated is still achieved, while the invariance requirements on the economic properties of the object placed by classical exchange and generic financial exchange are loosened herein.
This means at least two things: First, it means that there are quantitatively different amounts of symmetry in each of the respective classes of exchange – classical, generic, and synthetic. For if, following the group theorists, symmetry is (a) defined as ‘invariance to change’, and (b) measured by the number of the transformations that leave a property of an object or process invariant, then the fact that different classes of exchange have different invariance requirements on their respective economic properties means that, in turn, different amounts of symmetry mark the different acts of exchange; and these different acts of exchange can be grouped into different classes of exchange. Secondly, then, for this reason we know that insofar as synthetic finance, as a class of exchange, has the least restricted invariance requirements, this means that it has more symmetry than either of the other two classes of exchange from which it has historically differentiated itself. We must deepen our examination of the ontological meaning of these truths as we proceed.

iii. Our second example is that of a TRS.

Let us say that P has purchased, and is therefore generically invested in, an unsecured bond issued by Black Corp., which pays a fixed coupon of 7%. P enters into a TRS with R, in which P swaps the actual returns from the Black Corp. bond for the agreed-to spread of LIBOR + 100 bps. This means that under the terms of the contract, P will redistribute to R the actual coupon payments made by the Black Corp., plus or less any change in the market value of the bond. And in return, R agrees to pay P LIBOR + 100 bps.

Let us consider some basic features of this synthetic financial asset, which is best accomplished by reflecting on the material impact of the TRS for the parties involved.

For instance, for P: while on the one hand, and superficially, it is the case that P has actually invested in the generic financial asset of a bond issued by Black Corp., on the other hand, it is also the case that P is no longer materially invested in the generic financial asset of a bond issued by Black Corp. And why? Simply, by entering a TRS with R, P has now detached the property of risk from the bond, and sold-off that risk to R, i.e. P has materially detached the risk from the generic financial asset by process of synthetic exchange, and redistributed that risk and its cash flow to R.

Conversely, for R: on the one hand, and superficially, R has not actually invested in the generic financial asset of the Black Corp. issued bond; but on the other hand, by entering into the swap with P, it is also the case that R has purchased from P the risk in the Black Corp. bond – paying to P the purchase premium of LIBOR + 100 bps, and receiving from P the actual returns from the Black Corp. bond – yet without physically owning the generic referent of the Black Corp. bond itself.

From this we can observe that, in this case, the synthetic financial exchange of a TRS equates to an exchange between P and R of the total risks and associated cash flow endemic to holding the Black Corp bond, which are redistributed between the two parties. P retains as private property the generic asset of the bond, redistributing its actual returns to R. And while technically speaking R has not invested in and can otherwise claim no property ownership of the Black Corp. bond, nonetheless R does receive its actual returns, in turn agreeing to pay P the difference between the base rate spread and these actual returns. And finally, Black Corp. remains unaffected by the TRS nowise.
iv. Let us pause to briefly summarize both the *material significance* and *significance for materialism* of what we have thus far considered about synthetic finance, prior to further deepening our examination of its ontology.

We have so far really only made one point, but with a twofold-tiered exposition.

First, we observed in our example of the CDS that a synthetic asset replicates the generic financial asset to which it is ostensibly referenced, but in the process loosens a number of invariance requirements on the economic properties that constitute the assets involved in the exchange –and which it is important to note are invariance requirements on the economic properties of the respective objects exchanged in the other two classes of exchange of classical exchange and generic finance. Therefore, while our common terminology often colloquially denotes the ontological status of the synthetic object as some kind of ‘copy’ or ‘simulation, a ‘replica’ that is always ‘derived’ from an ‘underlier’ –the latter of which is the generic referent acting as the ‘model’ for its ‘copy’, and is therefore always perceived to somehow be a more ‘real’ object than its synthetic counterpart– we are increasingly seeing that things are not so simple as this. In fact, that there are far fewer invariance requirements as conditions for the achievement of symmetry in a synthetic exchange means that not only are the economic properties constituting such synthetic assets more pliable and fungible, but now we’re also seeing that synthetic finance, as a class of exchange, has more symmetry than the other two classes of exchange from out of which it has historically differentiated itself. It turns out that synthetic objects aren’t so much ‘less real’, or have ‘less reality’ than other non-synthetic economic objects; rather, they have just as much reality, albeit it is of an apparently different ontological domain. For this reason, we will later examine why Deleuze says that of the three registers of reality –potentiality, actuality, and virtuality– the synthetic asset still partially belongs to the latter, which is every bit as ‘real’ as the actual, albeit ontologically different in kind.

Secondly, we observed in our example of the TRS that while a superficial understanding of credit derivatives may lend some cause for belief that synthetic finance –because its assets are temporally and *linearly* ‘derived’ from a generic referent– is an ontological subset of the generic finance, once again we see that things are not as straightforward as we might expect. For already in our example of a single-name TRS, we saw that not only is it *not* the case that the causality of the generic financial asset is unidirectional on the synthetic asset, but now we see that a virtual causality from a synthetic exchange can be every bit as performative, material, and have very real material consequences on either a past (viz. preexisting) or even a future generic financial exchange. This means that the causality of the synthetic exchange on the generic exchange can be either linear or nonlinear –which is once more illustrative of the fungibility of synthetic finance. If the referent from a generic financial exchange appears to act as the underlying model to be copied by the synthetic asset, but then the performative impact of the synthetic exchange retroactively redefines the material terms of its underlier, how can we meaningfully speak of one or the other object as having ‘more reality’, when both sets of objects are constantly feeding into one another, and exogenously remaking each other’s interiority?

This twofold peculiarity requires a more in depth investigation into the ontology of synthetic finance –as a class of exchange that has differentiated itself from the other two classes of exchange, as a set of markets, the objects populating those markets, and in turn their constitutive mobile, fungible, and dynamical economic properties. This a future task for our speculative materialism.
Note 4. Tranches

i. Hitherto our consideration of credit derivatives has concerned a single-name asset. We considered a single-name CDS and a single-name TRS, both of which were synthetic assets replicating a single-name corporate bond from a single-name reference entity. However, the deep historical significance of synthetic finance resides in the differentiation of multi-name credit derivatives (sometimes also called ‘portfolio swaps’, or ‘portfolio credit derivatives’) from out of single-name credit derivatives—and in particular their usage, when combined with the technology of securitization, to engineer structured synthetic financial assets. For this reason, we will deepen our understanding of the peculiar but profound materiality of synthetic finance by now turning our discussion to securitization, or structured finance.

We will inaugurate this discussion by examining tranches.

While single-name credit derivatives make reference to a single obligation (e.g. a bond) of a single entity (e.g. Marx Corp. or Black Corp), multi-name credit derivatives reference a pool of obligations from a pool of names.

From one perspective, then, multi-name credit derivatives are simply the composition of a series of single-name credit derivatives into one portfolio. However, this only tells half of the story. The radical transformational essence of structured finance is its capacity—as a technology, a process, an object, and method of synthetic exchange—to aggregate a multi-named set of heterogeneous risks into a homogenous pool as a single risk, and then re-segregate this risk into different classes, whereby the risks and cash flows ontologically change in kind in the course of being structured as such. These new classes are called ‘tranches’, which may be arranged in a variety of ways, to contain a variety of specified risks and their associated cash flows.

Therefore, ‘structured finance’ is the term we use to define a process for the de-differentiation and subsequent re-differentiation of risk by method of tranching: it is a process for the pooling and redistribution of risk, through which any risks and cash flows (as well as other economic properties) become not only fungible, plastic, mobile, and substitutable, but now also capable of dynamically changing in kind.

ii. Let us construct and consider a most elementary example of a multi-name credit derivative.

First, we will collect 100 corporate reference debt obligations from a 100 corporate entities, which are representative of a wide variety of industries (e.g. agriculture, manufacturing, real estate, etc.). Each name, or referent, has a notional value of $10 million: i.e. each referent is a generic financial asset; they collectively constitute 100 generic financial assets; they have a notional value of $10 million each. We pool these names together, which creates a portfolio whose total notional value is $1 billion.

Secondly, we then construct five sequential tranches of notional value, ascending in seniority, as follows:
<table>
<thead>
<tr>
<th>Tranche</th>
<th>Notional Value</th>
<th>Attachment</th>
<th>Detachment</th>
<th>Leverage</th>
</tr>
</thead>
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<tr>
<td>A</td>
<td>$840 million</td>
<td>16%</td>
<td>100%</td>
<td>1.00</td>
</tr>
<tr>
<td>B</td>
<td>$40 million</td>
<td>12%</td>
<td>16%</td>
<td>6.25</td>
</tr>
<tr>
<td>C</td>
<td>$40 million</td>
<td>8%</td>
<td>12%</td>
<td>8.33</td>
</tr>
<tr>
<td>D</td>
<td>$40 million</td>
<td>4%</td>
<td>8%</td>
<td>12.50</td>
</tr>
<tr>
<td>E</td>
<td>$40 million</td>
<td>0%</td>
<td>4%</td>
<td>25.00</td>
</tr>
<tr>
<td>Total</td>
<td>$1 billion</td>
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Our reader is encouraged to remain mindful that we concern ourselves here only with synthetic replicas of 100 corporate reference obligations of $10 million each; our portfolio has not purchased or invested in, and otherwise does not claim ownership of 100 corporate bonds of $10 million each: if we did generically invest in and/or physically own such assets, and then proceeded to pool and tranche them, i.e. according to the methods of structured finance, we would now be elaborating for our reader the process of ‘cash securitization’, or ‘structured generic finance’—which is a process for securitizing generic financial assets.

Here we are specifically concerned with ‘synthetic securitization’, or ‘structured synthetic finance’, which is a process for securitizing synthetic financial assets; and so all of our previous observations on single-name credit derivatives (in Notes 1-3) may be comported into our compounded understanding of structured synthetic finance herein.

From the example provided above, we see a concrete illustration of our earlier assertion—namely, that the process of pooling de-differentiates 100 increments of $10 million each worth of risks and cash flows into one portfolio of $1 billion worth of risk and cash flow; and then the subsequent process of tranching re-differentiates the now $1 billion worth of risk and its cash flow back into 5 new classes of risks and cash flows—albeit the quantity and quality of these risks and their cash flows have metamorphosed, i.e. they have ontologically changed in kind. For this reason we can see why we say that structured finance is a technology for the fungible redistribution of risk and its associated cash flow. Moreover, we will also see that we synthetically ‘repeat’ the generic asset, but there is a new difference produced through its repetition.

iii. Closer consideration of the nature of tranches will better illustrate this truth.

To observe that (a) the result of pooling 100 corporate names into a single portfolio is to homogenize their risks and cash flows into an asset with a single risk and single cash flow; and (b) that once we pool these names together, we can then re-differentiate this one risk and its cash flow differently and flexibly as we so choose—this is intriguing enough in itself.

However, our reader may have noticed an additional interesting material result of this structuring process: by pooling the 100 credit derivatives into a single synthetic financial asset, and then ontologically re-differentiating that new single asset through method of tranching, the synthetic exchange results in the creation of several new economic properties which are specific to a synthetic asset, and which were not originally “in” or “of” the generic financial asset acting as its referent. Anytime we use tranches to redifferentiate risk, there are ‘levels of subordination’ to the tranches, which have a series of ‘attachment points’ and ‘detachment points’; this structuring process produces several new economic properties—for example, the properties of ‘credit enhancement’ and ‘leverage’ (among several others that we will not discuss herein). This is as unexpected as it is insightful, since it means that the synthetic asset begins by announcing
itself as a mere replica of its generic referent, just as the synthetic exchange begins by appearing as an avatar of a generic financial exchange; but there is a new difference produced by its repetition, for there are new and novel economic properties brought into being which are not of the generic asset, and not present in the generic financial exchange acting as the reference obligation for the synthetic exchange.

Let us briefly define and consider these properties.

*Levels of subordination* are defined as the order of seniority of risks and cash flows among the different tranches. An *attachment point* is the point at which losses attach to a particular tranche. And a *detachment point* is the point at which losses detach from a particular tranche, in order to attach to a different tranche with a higher level of subordination. The effect of tranching is the organic creation of such *points*. And the effect of these points is the organic creation of *credit enhancements*, which are various amounts of credit support provided to the different *levels of subordination*. And this, in turn, infuses the property of natural *leverage* into these levels, which is defined as the employment of debt to augment gains and losses.

For instance, in the example provided above, we have arranged Tranche E as the most *junior level of subordination*, with an *attachment point* of 0%, and a *detachment point* of 4%. Tranche E is therefore exposed to the risk of the total portfolio, insofar as the first dollar of any loss in notional value to the synthetic portfolio is absorbed by Tranche E, but materially affects none of the other Tranches. And correlativey, the first dollar of appreciation in notional value beyond the $1 billion valuation in the portfolio, which is to say any increase in profits beyond the amount agreed to at the commencement of the synthetic exchange, is enjoyed by Tranche E, but materially affects none of the other Tranches. For this reason we say that Tranche E is the ‘equity tranche’ in the synthetic portfolio, but that all of the other Tranches are ‘debt tranches’. And of course all of the levels will have various amounts of expected yield, agreed to at the commencement of the transaction. So for example, Tranche E will obviously have the highest expected yield, given that E assumes the greatest amount of risk.

Because we know that Tranche E has a notional value of $40 million worth in a portfolio whose total value is $1 billion, we see that the Tranches have been arranged such that Tranche E will continue to absorb all losses to the portfolio until such time that $40 million (or 4%) of the total notional value of the portfolio has been depleted –at which point the risk to the portfolio will detach from Tranche E, and then attach to Tranche D. Therefore, we can see that Tranche E provides a 4% *level of credit enhancement* to the other Tranches. But as we just noted, there also is no ceiling on the increased profits enjoyed by Tranche E, if and as the notional value of the total portfolio appreciates beyond $1 billion. This means that Tranche E, whose value is only $40 million, is exposed to the total returns and losses on a $1 billion portfolio –in other words, Tranche E is *leveraged* 25 times (i.e. $1 billion ÷ $40 million = 25). This is the meaning of our statement that Tranche E is the most junior level of subordination, with an attachment point of 0%, and a detachment point of 4%, provides 4% credit enhancement to the other Tranches, and has a leverage ratio of 25.

At the top end of the example provided above, we have arranged Tranche A as the most *senior level of subordination*, with an *attachment point* of 16%, and a *detachment point* of 100%. Tranche A is therefore not exposed to any risk of the $1 billion portfolio until the total notional values of Tranches E through B have been completely wiped out. For instance, once the first $40 million from Tranche E is wiped out, which is 4% of the total notional value of the portfolio, Tranche D begins absorbing subsequent losses in the portfolio up to 8%; at which point Tranche
D detaches, and Tranche C begins absorbing all subsequent losses up to 12%; at which point Tranche B now attaches, and begins to absorb all subsequent losses up to 16% of the total notional value of the portfolio of names.

Because we know that Tranche A has a notional value of $840 million of a portfolio whose total notional value is (or was, to begin with) $1 billion, up until the time that $160 million (or 16%) of the total notional value of the portfolio has been depleted, Tranche A remains materially unaffected by the losses to the other Tranches. Consequently, Tranche A is exposed to comparatively less risk than the 4 Tranches with lower levels of subordination, and has comparatively little, and in fact almost no leverage whatsoever. Tranche A also provides no credit enhancement to the other levels. As a result of all of these factors, the expected yield of Tranche A will be comparatively less than the other Tranches.

Note 5. Credit Linked Notes

i. The risk and cash flow attached to a Tranche is represented by the value of a credit linked note. Credit linked notes (CLNs) are an instrument for fusing multi-named credit derivatives with structured finance. They are therefore a means for redistributing risk and cash flow throughout capital markets by process of structured synthetic finance.

A CLN is a debt note, or obligation, sold for a sum to an investor by an issuer, wherein that note represents a commitment by the issuer to make a principal payment due at maturity, or a coupon payment periodically, and whose value and yield is agreed to ahead of time —but whose value and yield is written down contingent to occurrence of a credit event [figure 2.5]. For this reason, the simplest way to begin to understand a CLN is to think of a fully funded credit derivative in which the protection seller prepays to the issuer the notional value of the swap ahead of time, and in return receives periodic (re)payments over the tenure of the swap; but if a credit event occurs, the principal owed to the protection seller by the protection buyer for providing event protection depreciates in value.

In other words, when a synthetic financial exchange makes use of CLNs, the payment for an event which has not yet happened is paid in full at the commencement of the transaction by the CLN investor, who is the protection seller. And then a payment for that nonevent is periodically made, or rather returned to the protection seller over the tenure of the transaction by the issuer, who is the protection buyer —unless, of course, this nonevent eventually occurs. The terms of the exchange are backed by the issuance of a note, with a corresponding notional value: this note is a debt security, and as such, is a CLN.

ii. Let us consider an example of a CLN.

First, we pool and tranche 100 generic names of $10 million each into a synthetic portfolio of $1 billion.

Secondly, we wish to transform this unfunded multi-name credit derivative into a fully funded asset: to do this, the protection buyer will issue, or sell, CLNs to investors, with a total notional value of $1 billion. (Note: because this is a structured synthetic exchange, the CLNs are ‘linked’ to the notional value of different Tranches, and will therefore have
various levels of subordination, credit enhancement, and leverage, and thus different amounts of risk, expected yields, cash flow, and possibly even different maturities). By purchasing CLNs, the issuer prefunds the $1 billion synthetic portfolio.

Thirdly, the CLNs yield a periodic coupon payment, whose amount is agreed to ahead of time; but they also carry a contingent payment feature. Over the tenure of the of transaction, the issuer will continue to make coupon payments to the holder of the CLN, unless or until such time of occurrence of a credit event in the reference portfolio—at which point the notional value of the reference portfolio is written down, and in turn the coupon payments made to the holders of the CLNs are also written down. As the losses to the reference portfolio continue to accrue, so too is the interest on the notes and principal owed the holder of the CLN reduced.

Lastly, at the termination of the transaction, the remaining principal is returned to the protection seller.

Let us consider the basic material significance of a CLN.

We earlier observed that a standard, single-name credit derivative is generally an unfunded asset, insofar as there is no invariance requirement on the collinearity risk and ownership. We also observed that this means, for instance, that the protection buyer—who is virtually detaching the risk and its cash flow from the referent in order to replicate and exchange that risk and its cash flow with the protection seller—need neither own, nor have any other direct connection to, the generic asset whose event risk is replicated by the synthetic exchange. To any reader otherwise uninitiated in the peculiar materiality of credit derivatives, it’s likely that this already looked rather topsy-turvy: ‘How can one sell that or a part of that which they do not own?!’ Or, ‘How can one buy event protection on an asset that they do not own?!’, our reader will have marveled. ‘Does not the concrete principal of private property stand for nothing?!’

However, we should caution this reader that with the progressive differentiation of the CLN things have yet become more peculiar still. An unfunded credit derivative may have struck one as odd, or not; but its concept was always accompanied by the reassuring notion that the protection seller was being paid for a service of labor: namely, that she may or may not become the party responsible for repaying a generic debt obligation—contingent on occurrence of a credit event—to whose risk she was originally unconnected, but was now being paid in advance to assume. Conversely, the protection buyer was purchasing a guarantee on the risk of the reference asset, and so was naturally paying the protection seller in advance for assuming such risk. It was a synthetic exchange, inasmuch as no party to the synthetic exchange was party to the original generic financial exchange, whose asset provided the referent from which the synthetic asset was derived. But it was enough like a classical exchange of labor for wages, or rather wages now for possible future labor, insofar as the protection seller may have to provide a service of labor for the protection buyer in the future, and so is paid now for assuming this risk in the present. And it was enough like a generic financial exchange of insurance, insofar as the protection buyer was guaranteeing a level of value of the reference asset, and making a premium payment in the present, as an advanced charge by the protection seller for providing the guarantee of the level of value of the asset in the future. This portion of the transaction, at least, was surely partially acceptable to our uninitiated reader, even if they fundamentally regard credit derivatives as at
base perverse, and otherwise desecrating the holy unity of property ownership and valorization of capital.

However, with the CLN we are now observing a method of *prefunding* a synthetically replicated exposure to risk and cash flow, and so have effectively reversed the temporal order of the distribution of cash flow amongst the parties, yet without reversing the spatial order of the distribution of risk. And for this reason, any ostensible similarities between either a classical exchange (of wages in advance for assuming the risk of service of labor in the future), or a generic financial exchange (of insuring the value of an asset in the future by making payment on its value in the present) now collapse. For now the CLN investor is buying from the CLN issuer a risk in a reference asset that the issuer does not own—but is also agreeing to pay in full and in advance for this risk. And correlative, the CLN issuer is selling to the CLN investor a risk in a reference asset that the issuer does not own—but is being paid in advance for assuming the risk that *no* credit event in the reference asset will occur.

iii. There are several revelatory material effects that result from this method of synthetic exchange, but we will only concern ourselves here with the most notable one.

A CLN investor, as a protection seller, is purchasing from the CLN issuer the risk in the generic reference entity, just like the protection seller would do in any standard credit derivative transaction. Albeit now, by *prepaying* the issuer for this risk, the CLN investor has also purchased a generic risk in the issuer of the CLN as well. This writes another asset into the synthetic exchange that was not there from the start. Namely, this effectively creates an additional generic debt obligation, and therefore a new generic financial asset within the synthetic asset itself. For the CLN investor is now not only ‘going long’ the synthetically replicated reference obligation of the $1 billion portfolio, but has now also created a new generic financial asset through purchasing a risk exposure in the CLN issuer—which is to say that the CLN investor is now also ‘going long’ a generic financial obligation in the CLN issuer. In short, and importantly, *this means that the CLN investor is synthetically invested in the material success of the reference entity, but therefore also generically invested in the material success of the CLN issuer. And this means that in reality the CLN investor is invested in both the material success of the $1 billion reference portfolio and CLN issuer alike. Unlike the unfunded single-name CDS, then—wherein the protection seller and protection buyer are involved in a zero-sum, high-stakes game, which one of the parties will ‘win’ and the other will ‘lose’; now, by contrast, it is possible for both parties to benefit from the transaction—which means that synthetic exchange contains a non-zero sum mode of economic transaction.*

Relatedly, because the CLN is a device for converting a credit derivative as an unfunded asset into now a funded asset, we immediately become aware that there is a basic ontological difference between these two different synthetic incarnations—i.e. of an unfunded single-name credit derivative and a fully funded multi-name credit derivative.

We observed at the outset that single-name credit derivatives are unfunded replicas of funded generic financial assets, and so in this respect what defined the single-name synthetic asset—as an avatar of its generic referent—was precisely its unfunded nature. But now we see that the progressive differentiation of a CLN signals the arrival of a mode of synthetic financial exchange that is, on the one hand, an exchange of a fully funded asset that is yet still synthetic, when what had previously distinguished the synthetic asset from the generic asset was precisely
this basic ontological difference; but that on the other hand, it now turns out that this type of synthetic financial exchange is even capable of creating new generic financial assets *ex nihilo*.

That the synthetic asset is fully funded, and yet is nonetheless a *fortiori* an ontologically completely different asset from any generic asset is observable by virtue of the fact that the synthetic asset has loosened many of the invariance requirements on the collinearities (e.g. on ownership, maturities, notional amount, and so on), and therefore has both more fungibility and more symmetry than its generic counterpart. This, perhaps, at this stage in our investigations, is unsurprising, given its consistency with the ontological trend we have observed throughout our examination of synthetic finance. But to say the least, it is rather surprising to witness a method of generic financial exchange, and therefore a method for the *creation of generic financial assets* embedded within a technology for synthetic financial exchange. This tells us once again that you can derive the generic from the synthetic. And this also once more tells us that synthetic finance is a larger class of exchange than generic finance, since the former already contains the latter within itself, but not vice versa.

The question is what this means, ontologically and materially? This warrants a deeper look into structured synthetic finance, and is a future task for our speculative materialism.

**Note 6. Structured Investment Vehicles**

i. In the beginning was the natural object. Classical exchange involves the conversion of a natural object into a commodity. Generic finance creates an asset from the commodity. And synthetic finance is the virtual replication of the generic asset—in synthetic exchange, we repeat the asset, but in the course of its repetition, a new difference is produced. Structured synthetic finance, then, is the process by which a synthetic asset is transmuted into a security: the securitized asset has been divided, but in the course of its division it now changes ‘in kind’.

Securitization, whether cash or synthetic, involves the pooling (de-differentiating) and tranching (re-differentiation) of the risks and cash flow of the assets involved, and their subsequent redistribution in the form of the new securities that result. The vehicle used to accomplish this process is either a special purpose vehicle (SPV) or a structured investment vehicle (SIV).

Our ultimate concern here is with SIVs. However, because SPVs are the vehicular predecessors to SIVs, it is worth first observing their form and function in structured finance.

When financial assets are structured, any number of assets are pooled, packaged, and sold by their owner to a SPV: this vehicle is a shell of a company, or corporation, specially created by its originator for the purposes of structuring the assets, thereby recreating them anew as asset-backed securities, and issuing notes on these new securities to fund the operation. This means that the SPV purchases, pools, and tranches the assets, which in their new form (i.e. as securities) are ‘backed’ by their cash flow; such asset-backed cash flows are sold as securities to investors, and are therefore called ‘asset-backed securities’ (ABS).³

³ ABS is the general term used to denote any variety of securitized generic financial assets, whether based on mortgages (MBSs), collateralized commercial loans (CLOs), collateralized corporate bonds (CBOs), collateralized insurance obligations (CIOs), and so on.
Because the SPV, like all such vehicles, is a technology for creating securities from assets, it earns a fee for its labor; but to be clear, it is otherwise not a party to the structured financial exchange: the underlying assets from which the cash flows of the securities derive are technically owned by the investors — although this is already somewhat difficult to say, given that the materiality of the assets are no longer individuated assets, but have metamorphosed into securities, and all cash flows from the assets have now been divided into securitized cash flows, whose guarantee has taken the form of notes; and all cash flows ‘pass through’ the SPV on to the investors, according to the Tranche, its agreed to terms of yield, level of subordination, etc. to which their note is linked.

The SPV, then, acts as master conduit, or rhizome through which cash flows — it is a hollowed substance, a kind of body without organs, whose role is to buy or replicate the originator’s property as assets, turn such assets into securities, sell these securities to investors, and then pass this cash flow through itself and on to the originator. And then again, throughout the tenure of the structured financial transaction, it passes the cash flows from the asset-backed securities on through itself, but this time to the investors.

For this reason, we see and say that the SPV is a ‘pass-through’ vehicle. Moreover, it is bankruptcy remote, it has no legal right to any principal cash flow, and the whole of its life is limited to the transaction for which it has been exclusively brought into being: when its purpose has been accomplished, the SPV has not so much ‘killed’ or ‘put down’, as it now simply ceases to exist.

The historical development of structured finance involves the concomitant differentiation of SIVs from out of SPVs.

SIVs are just like SPVs in all aforementioned form and function, as outlined above. However, there is one important ontological difference: rather than selling notes to investors that are directly tied to the cash flows from ABS, the SIV sells notes tied to the cash flow derived from the SIV itself.

Previously, with the SPV, the structuring vehicle sold notes as a way of funding the purchase of assets and their subsequent transmutation into securities. This meant that by buying the notes backed by the cash flows of the securities, investors were simulating property-ownership of the assets, insofar as the SPV ‘passed-through’ the cash flow from the securitized assets on to investors. However, the SIV sells notes to investors to fund its purchase and holding of the assets that it transmutes into securities. This means that investors are buying notes backed by the cash flow derived from the SIV, and the SIV is simulating property-ownership of the assets, insofar as the SIV funds its notes payments to investors through the cash flow from the securitized assets — but now the notes are linked to itself, not to the securities. This makes the SIV itself an asset-backed security.

For this reason, we see and say that the SIV is a ‘pay-through’ vehicle. Moreover, this vehicle is not only bankruptcy remote, and not only has no legal right to any principal cash flow, but by virtue of its rhizomatic and non-substantive substance, it is a vehicle for the abolition of private property. Like the SPV, the whole of the life of the SIV is limited to the transaction for which it has been exclusively brought into being: when its purpose has been accomplished, the SIV is not so much ‘killed’ or ‘put down’, as it now simply ceases to exist.

ii. Let us reflect on the ontology of the SIV. There are three points to make, briefly.
First, we will again observe a particular instance of the progressively loosened invariance requirements we have generally witnessed throughout our examination of the ontology of synthetic finance. In this case, we see that the requirement on the collinearity of ratios of value has been loosened.

Let us observe that in any instance of either a classical exchange or a generic financial exchange there is an absolute invariance on the collinearity of ratios of value –whether it is a matter of buying and receiving $100 worth of a classical object, or buying and receiving the yield on $100 worth of a generic financial asset; in every instance the terms of the transaction are such that the notional value of the referent and the notional value of its cash flow should be absolute, invariant, i.e. will not curve or bend or twist or warp over the tenure of the exchange. This means that the achievement of symmetry in these two classes of exchange requires an invariance on the property of the ratio of value. This invariance requirement initially carries over into a structured financial exchange –but now over time, and especially with the transition from an SPV to the SIV, has been progressively loosened. How so?

We will notice that in an SPV-administered structured financial exchange, there is a total notional value to the reference portfolio, whose risks and cash flows have been securitized; and when the SPV sells the notes to investors, they also have a total notional value, whose risks and cash flows have been divided into Tranches –but at any rate, the terms of the exchange intend to align these two notional values, as if they were a pair of parallel lines, whose equidistant alignment will not curve or bend or twist or warp over the tenure of the exchange.

However, with an SIV-administered structured financial exchange, and in particular, with the transition from the structuring vehicle acting as a pass-through to now a pay-through vehicle, this invariance requirement on the ratios of value is loosened. Again, we see that there is a total notional value to the to the reference portfolio, whose risks and cash flows have been securitized; and again, when the SIV sells the notes to investors, they also have a total notional value, whose risks and cash flows have been divided into Tranches –but in this case, the terms of the exchange do not align these two notional values, they need not be arranged as parallel lines, and their notional values may curve or bend or twist or warp over the tenure of the exchange. For this reason we will observe that the structured synthetic financial exchange that utilizes a SIV has loosened the invariance requirement on the collinearity of ratios on notional values, and therefore has yet more symmetry than the aforementioned-like generic and synthetic versions of structured finance.

Secondly, as we saw already in our consideration of CLNs (Note 5), we should not underestimate the profound material capacity of synthetic exchange to create new assets, with new and novel sets of economic properties –synthetically created, yes, but created anew nonetheless. The SIV shows us this once again. How so?

We know from our example, that the reference portfolio in the structured financial transaction is composed of credit derivatives, and is therefore ostensibly a synthetic replication of a generic financial exchange. Likewise, we have seen that the parties to the transaction are synthetic lenders and creditors, or sometimes both (see Note 7), depending on the arrangement of varieties of synthetic obligations, their temporal order of risks, and temporal order of payments. But now, with a SIV, we see that the CLN investor has also entered into a generic financial exchange with the SIV—which is itself a virtual and non-substantive, but for all that no less real entity. This means that the credit linked note itself is both a synthetic and generic financial asset—but that also, quite unexpectedly, it is an asset whose status as a generic financial asset was only
brought into being only by virtue of first being a synthetic asset. This means that once more we see that, in a structured financial transaction that uses SIVs to distribute CLNs, we derive the generic asset from the synthetic, rather than vice versa, and that therefore a synthetic exchange is both more original, and a more fungible way of creating financial assets ex nihilo.

Thirdly, then, must be our Deleuzian question as we move forward—insofar as it is a question about the rhizomatic multiplicity of the SIV.

SIVs, like all such vehicles, (a) have no past and no future, insofar as they are convoked into being for the purposes of the transaction at hand, and when once completed are wound down; (b) are discrete and limited, in that they are prohibited from carrying on any other business not germane to the transaction; (c) are nominal and independent orphans, for their shares are public charity, they are bankruptcy remote, cannot be consolidated by any company or individual, and are not a subsidiary of their originator; and (d) are therefore non-substantive shells, i.e. a ‘filling’ of cash flow constantly passes through them, yet there is no essence of filling inside.

For this reason, in the future we will turn to Deleuze—for why he calls this kind of vehicle a body without organs, and shows that this is much more than simply a fun metaphor describing its ontological make-up. Indeed, we wish to know what, if any, is the historical-materialist meaning of this movement from a tree-like structure to the distribution of flows of finance-capital, which dominated the structure to intermediation for so long, but now is increasingly a rhizomatic, non-substantive, dynamical structure? This is a future question to be more thoroughly asked and addressed by our speculative materialism.

Note 7. Synthetic CDOs
i. All threads of analysis from our previous Notes can now be woven into an understanding of peculiar material ontology of the economic object of the synthetic CDO.

Available literature on structured finance commonly defines ‘cash CDOs’ as structured generic investment products, whose securitized cash flow is sold to investors in the form of debt notes, and is backed by pools of assets culled from balance sheets, capital markets, or some combination of the two. Of course, we are, as always, ultimately only interested in synthetic finance, and therefore in synthetic CDOs herein. However, for this very reason our reader will permit us to make a brief observation about structured generic finance (also called ‘cash securitization’), insofar as it will inform our historical-materialist understanding of the progressive differentiation of synthetic finance from out of generic finance, and in turn how these two classes of exchange—with their overlapping but different institutions, markets, and the objects populating them—ontologically interrelate.

The concept and technology of the synthetic CDO has its historical origin in the cash CDO; and the concept and technology of the cash CDO has its historical origin in still earlier forms of structured finance—such as CMOs (collateralized mortgage obligations), CLOs (collateralized loan obligations), and CBOs (the collateralized bond obligations), and so on. However, what differentiates these other, prior, structured generic financial assets from the CDO in its particular structured generic financial guise is a basic difference in their compositions: while a CMO is solely composed of mortgages, a CLO solely of loans, a CBO solely of bonds, and so on, the CDO, by contrast, is an impure heterogeneous pool of varieties of assets, an adulterated mix of
mortgages, bonds, loans, and all other kinds of generic debt objects, with different maturities, risks, and expected returns. In fact, the logic behind the CDO goes one step further than all previous forms of structured finance by reasoning that if it’s simply a redistribution of yields we’re after, why not simply create a structured vehicle whose composition is a hybridized assemblage of generic and synthetic assets?

Therefore, the CDO is the first structured financial technology to consciously acknowledge that if it’s the properties of risk and cash flow that constitute the valorization of finance capital, then any given number and classes of assets can be collected and hybridized, de-differentiated through the process of pooling, and re-differentiated anew through the process of tranching, therein qualitatively changing their risks, cash flows, and other economic properties in kind, as well as therein bringing new economic properties into being. For this same reason, today, to speak of ‘synthetic CDOs’ is increasingly anachronistic, since on the one hand, this aforementioned discovery gives birth to the actuality of the synthetic CDO, and yet on the other hand, over time we see that any earlier fixed, or observable ontological line of distinction between cash and synthetic CDOs is regressively differentiating into now a de-differentiated combination of both. In other words, the synthetic CDO signals the progressive differentiation of a class of exchange that does not preserve the previous ontological distinction between synthetic and generic assets—for in the process of securitizing such different classes of assets, their differences become indistinct, indifferent, de-differentiated.

As speculative materialist political economists, we wish to know the material significance of this? Of what, if any, is the historical-materialist trajectory of this material development? Of what it means for the future of the dynamical systems of economics we call capitalism? And how we should regard the relation of generic to synthetic finance when now there arises a class of exchange that regressively differentiates what was previously differentiated, isolable, and distinct?

For it is the case, quite obviously, that generic finance historically precedes the material development of synthetic finance as a class of exchange, insofar as the latter has differentiated itself – linearly, historically, progressively– from out of the former. And yet we are constantly discovering and rediscovering in so many different ways throughout our case study on credit derivatives that generic finance is ontologically a mere special case of that more general class of exchange that is synthetic finance. Indeed, if a synthetic CDO is a hybridized assemblage of generic and synthetic assets, while a cash CDO is solely composed of generic financial assets, this once again reveals that synthetic finance is an ontologically larger class of exchange then generic finance, for the former contains the latter within it, but not vice versa. This material development is illustrative of what can only be labeled as the regressive differentiation of capital in its synthetic systemic incarnation. Our future speculative materialism must seek to draw out the deep ontological significance of this aforementioned counterintuitive truth.

ii. Let us now consider a simple example of a pure synthetic CDO [figure 7.1].

The first step is to de-differentiate a heterogeneous pool of risks and cash flows into a single, homogeneous portfolio. To do this, an originator will identify and select a pool of names, whose risks and cash flows are synthetically transferred into the portfolio. Let us say that the pool of assets comprising our portfolio has a notional value of $1billion.
The second step is to now re-differentiate this one risk and its cash flow into qualitatively new risks and cash flows. To do this, we will create 4 Tranches (A, B, C, D). Each Tranche will have different risks, cash flows, levels of subordination, detachment and attachment points, credit enhancement, and leverage.

We must therefore model a probability distribution for this pool of names. For example, our model may tell us that to get a D tranche, we need a credit enhancement of 2%. Let us posit that the most junior level of subordination will come from the originator. This means that the originator will be both a protection buyer on the portfolio of names, but is also invested in the material success of the portfolio: the originator will buy protection on the reference portfolio, but will also retain the first 2% loss to the notional value of the portfolio (for this reason, we will call this first 2% loss the ‘threshold risk’, and the holder of this threshold risk –which in this case is the originator– ‘the thresholder’).

The third step is to create a SIV to execute the transaction. The order of its business will be:

a) The SIV sells unfunded protection to the originator by way of CDS (although a TRS could just as easily be used) against the $1 billion reference portfolio, for a total value of $100 million over and above the first 2% loss, which is $20 million.

b) The SIV sells $100 million worth of CLNs to various CLN investors. Because there are 4 Tranches, there will be 4 classes of notes, (A, B, C, D) corresponding to each Tranche (A, B, C, D), and each with a value of 2.5% of the $1 billion reference portfolio, which is $25 million per tranche. Therefore, each class of CLN investor is both selling and prefunding event protection on the $1 billion reference portfolio.

c) The combined material effect of a) and b) is that the originator has bought credit protection equal to the total notional value of the CLNs issued by the SIV.

The fourth step is for the SIV to use the cash raised by issuing the prefunded CLNs to invest in low risk, low-yielding securities, or some other default-free collateral (e.g. government bonds).

Let us consider the distribution of risks and cash flows to the parties involved in this synthetic financial exchange.

First, let us consider the SIV.

We will recall that, materially speaking, the SIV is an empty vehicle, a rhizome, whose sole purpose for being is the distribution of cash flows. But it is also technically the property owner of the synthetic assets –albeit the assets have metamorphosed into securities, and as such have been divided up amongst the various CLN investors. This means that the SIV has been used to synthetically replicate property ownership among the CLN investors, yet without any ownership of property changing hands.

The SIV receives cash flows from both the originator and the CLN investor alike: the originator is an unfunded protection buyer, who pays the agreed-to protection premium to the SIV. But the SIV in turn also buys funded protection from the CLN investors, receiving from them prefunded, up-front protection payments through a one-time sale of the notes, and whose
proceeds the SIV has used to invest in low-yielding, low risk securities, which are held as collateral.

Secondly, let us consider the originator. The originator is a protection buyer, but also occupies the most junior level of subordination on the synthetic CDO. By defining this 2% detachment point as the portfolio’s ‘threshold risk’, the originator becomes ‘the thresholder’. As the thresholder, the originator is providing 2% credit enhancement to all 4 Tranches; and as a result, the originator is the first party exposed to losses in the reference portfolio.

However, anything over this first 2% loss to the synthetic portfolio (i.e. anything over the first $20 million loss) triggers a compensation claim by the originator to the SIV. If this happens, two things will now result: First there will be a sale of the low risk collateral set aside by the SIV, and subsequent proceeds from the sale are made by the SIV to the originator. Secondly, and at the same time, the value of the CLNs will be written down – first affecting Tranche D, then Tranche C, then Tranche B, and then Tranche A – until such time that the losses exceed 12% of the total notional value of the reference portfolio.

After the losses to the synthetic portfolio have exceeded 12%, the CLN holders are absolved of exposure to any future losses, and the originator is now left with a synthetically structured asset that is absent any risk or cash flow – i.e. there is now currently no longer any value to the portfolio whatsoever.

Finally, this brings us to the CLN investors. As we mention above, from 0% to 2% loss to the notional value of the reference portfolio, the premium payments made by the SIV to the CLN investors remain unaffected. However, once the 2% risk threshold has been crossed, the lowest level of subordination attaches, which is Tranche D, followed by Tranche C, then Tranche B, and lastly Tranche A.

This means that from 2% to 12% loss to the notional value of the reference portfolio, or from $20 million to $120 million worth of losses, the CLN investors retroactively absorb the losses to the portfolio by writing down the value of their notes, and therein incur a cash flow reduction in premium-payments made to them by the SIV. But because the CLN investors have prefunded their protection payments, once the Tranche to which their note corresponds has been detached from the transaction, all retroactive liability is terminated, and their role in the transaction is closed.

This means that the returns on CLNs have been leveraged by the Tranches above them, yet the downside of their losses is only an augmentation of risk in reducing the value of their note to zero – they cannot, unlike in other kinds of leveraged transactions – lose more than they have invested. For this reason, we see and say that structured leverage is an ontologically different kind of leverage than unstructured leverage. And for this reason, structured leverage is what we call ‘natural leverage’ – i.e. it is natural and organic to the composition of its structure, which has the effect of augmenting the volume of gains and speed of losses, rather than artificially employed to augment both the volume of gains and volume of losses.
i. Let us close by briefly reflecting on the nature, both actual and potential, of the structured synthetic reference portfolio. This, in turn, will allow us to reflect on the inherently redistributive capacities of synthetic finance, and on the wholesale materiality of credit derivatives as a subclass of synthetic financial exchange.

In the example provided above, we followed common financial industry practice when we pooled and tranched a collection of risks and cash flows, which were synthetically replicated from $1 billion worth of corporate names. However, an interesting and not unimportant speculative materialist question to ask here is: what else could constitute our reference portfolio, and what would be its material effect?

ii. For example [figure 7.3]:

Let us imagine that every individual—regardless of their race, socio-economic class, or gender—were to be an originator of their own synthetic CDO. A first thought may regard this as counterintuitive. However, once we have realized how such a synthetic CDO would be composed, this is perhaps not such a bizarre notion.

How would this be accomplished?

(1) One the one hand, we would identify, quantify, and collect a *universal* pool of all risks and their cash flows into a single portfolio through method of synthetic replication. This portfolio would be a synthetic portfolio, and as such, would comprise the ‘base matter’ for every individual portfolio. An elementary accounting formula would then allow us to combine as the referents for each individual’s portfolio a co-equal split between (a) total GDP (gross domestic product), or even GGP (gross global product), and (b) an individual’s annual taxable income. Each and every individual would then hold their own individual synthetic portfolio, and with its own partially codependent total notional value, which is determined by combining (a) and (b) by a common divisor.

(2) If our reader at this time will please return to the example and figure provided in 7.1, in order to substitute the following terms in figure 7.3, she will see the following:

(a) as the synthetic portfolio: ‘total GGP + an individual’s annual taxable income’ is put in place of ‘$1 billion of corporate assets’; and
(b) as the originator: ‘every individual’ is put in place of ‘XYZ protection buyer’;
and now
(c) as the CLN investor/funded protection seller: the various ‘Tranches’ will be occupied (in the form of note holders) in an ascending scale of ‘every individual’, based on their annual taxable income—or for that matter, on any other qualification we wish to agree on.

Our reader will now see that:

(3) This very simple act will simultaneously tether each reference portfolio to a combination of collective and individual wealth, while tailoring each synthetic transaction to an individual’s redistributive needs. We have created a synthetic CDO, which uses the circulation of
synthetically-replicated risk and cash flow to redistribute risk and cash flow when and if it is needed. There has been no appropriation of private property (at least not up-front and ostensibly), no shift in society’s current mode of production or consumption, nor any authoritarian reallocation of wealth. No one –to begin with –has changed their vocation, their employment status, or anything else of the like.

And yet the wager of our speculative materialism is that by restructuring the mode of circulation, a new mode of structuring the interrelations of production, consumption, distribution, and circulation may actualize herein.

A final point, then, is that there is no physical or generic financial limit to the assets whose risk and cash flow we wish to synthetically replicate. Moreover, these thoughts open up to us only once we begin to grasp the fungible character of synthetic assets, the de-differentiating and re-differentiating capacities for different risks and cash flows that result from the process, technology, and class of exchange that is synthetic finance. Consequently, these are future topics to be examined by our speculative materialism.
Figure 1.
Single-Name CDS

Payment upon occurrence of a credit event

Protection buyer

Premium
(_until expiry of tenure or credit event, whichever is earlier)

X bp

Protection seller

Reference obligation
Figure 2.
Credit Linked Notes

Issuer -> Investor

Coupon/Interest

Principal

At maturity, par less depreciation in reference obligation due to any credit events

Reference obligation
Figure 7.3
Synthetic CDO