A Marxian Theory of Credit-Money*

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Abstract

In this paper I reconstruct the credit functions of money and argue that these are three: means of payment, credit-money and debit-money. These functions make up a hierarchy and are inextricably related to one another. For money to be the means of payment of a product purchased earlier on, a particular claim to future money on the buyer of the product has to have mediated this purchase. When this claim is securitised, it becomes credit-money. The fact that the debtor's promise of future money is conditional upon the debtor's ability to fetch this money from the market on time reveals that credit-money is conditional future money. Since credit-money is tradable as a self-standing product, debit-money differentiates itself from the means of payment as the means of sterilisation of a securitised debt. I argue that credit-money is the origin of convertible currency and that debit-money is the origin of the system of settlement of payments through debt clearing and therefore, of inconvertible bank currency. I also show that credit brings about the differentiation of liquidity from solvency, and that the differentiation of financial credit from commercial credit turns the individual quest for dynamic solvency into a quest for an adequate level of liquidity at each point in time.

Keywords: Credit-money, Means of payment, Commodity, Marx

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1. Introduction

This is a working paper on the concepts of means of payment, credit-money and debit-money, as well as the relationship between one another. The discussion will be a conceptual account of the unfolding of the function of means of payment from that of back-up reserve or contingency fund, which is a more general function of money and not covered in this paper,[1] that of credit-money from the function of means of payment, and that of debit-money from credit-money. Thus it will be argued that the functions of money make up a hierarchical structure of drivers of commodity exchange and circulation. The demonstration of the market adjustment and the adjustment of the system of reproduction towards their respective equilibriums lies outside the scope of this paper, since otherwise each function would require at least one paper in its own right. However, I will spell out the main features of each function and explain the concept of debit-money, which, to the best of my knowledge, has not been picked up by the economics literature.

The discussion rests on the fact that commodity producers are private and immediately independent from one another. In this context, the output of commodity producers is not asserted as part of the social product until it is sold, and whether a certain output is sold or not, and if it is, the conditions of its sale, is uncertain to the seller because it depends one-sidedly on the will of its prospective buyers. An atomistic system of production can only render the commodity as the objectification of the social relation of production of each immediately isolated commodity producer. The commodity will first be a conditional, particular mercantile product for sale – C –, with which the isolated individual will try to establish the universal relation of production. If the commodity producer manages to sell this mercantile product, his or her commodity will be turned into a determinate quantity of money – M –, which is the universal,

[1] I have discussed the function of money as a back-up reserve in Ahumada (2013b).

unconditional form of the product, and hence the general form of the mercantile good for consumption. Now the commodity is its owner's social relation of production, and hence purchasing power. The commodity producer will transform this money into the particular mercantile products for sale which are product-commodities to him or her – UVp. These are the particular mercantile products for sale which the commodity owner needs in order to reproduce his or her individual conditions of life and put together his or her own next mercantile product for sale – C. In so doing, the commodity producer will create his or her next commodity.

This paper draws on Smith's (1776), Ricardo's (1817) and Marx's (1859, 1867, 1885, 1894) distinction among value, exchange value and use value, and on Levín's (1997, 2010) distinction between mercantile value and value on the one hand, and mercantile use value and use value on the other. In so doing, it integrates the Walrasian (Arrow & Debreu, 1954; Patinkin, 1956; Walras, 1874) and the Ricardian (Ricardo, 1817; Sraffa, 1960) frameworks, and transcends them both. To sum up, value is the objectification of the total social labour cost of reproducing a mercantile product, and in commodity production it takes the form of mercantile value because the sale price necessarily deviates from the immanent cost price of mercantile products. Use value, in turn, is the proper conceptualisation of utility in the neoclassical sense (Edgeworth, 1881; Pareto, 1906). It is the objectification of the total quantity of social labour that the consumption of a product is expected to save its user, because it has been already made and is now readily available for private consumption. In commodity production it takes the form of mercantile use value because the purchase price of mercantile products necessarily deviates from their immanent labour-saving, or utility, prices. The latter deviation is the trigger of the market adjustment, and the former is that of the dynamic adjustment of the system of reproduction. Disregarding commodity circulation, which is just a mediation of commodity exchange, the lifecycle of the commodity takes the form C-M-UVp because the commodity producer starts with a particular form of mercantile value, with which he or she expects to impose a cost on society. If the commodity producer is able to do so, he or she receives the universal form of mercantile value and general form of mercantile use value, which the commodity producer can transform into particular forms of mercantile use value for consumption at his or her own will.[2]

In this paper I argue that credit is a very specific driver of commodity production and presupposes a series of layers of other money functions supporting it. I note these functions from the foundation up: measure of mercantile value, measure of mercantile use value or means of purchase, money of account, currency,[3] temporary reserves or temporary universal savings – i.e. stores of currency – and back-up reserves or genuine savings. Back-up reserves are made up of money hedges in the sphere of mercantile labour – e.g. specie in a reserve bank – and money hoards in the sphere of unproductive consumption or, equivalently, of domestic labour – e.g. specie in personal safes.[4] Whereas the structure of the functions of money just outlined is essential to the argument of my paper, the labour content of the concepts of mercantile value and mercantile use value is not, since I will only deal with the formal determinations of the means of payment, credit-money and debit-money. I have presented the content of these concepts nonetheless, because they will be referred to frequently and I wish to avoid any metaphysical characterisation of them, such as generic cost and generic benefit.

In section 2.1 I will argue that money develops the function of means of payment when the commodity producer is willing to buy but not ready to pay yet, and that this is the origin of the credit relation of production. I will show that the credit relation of production is the complement and opposite of the exchange relation of production, and that they both make up the commodity relation of production – or commodity exchange – as its driver and its foundation respectively. I will show that the credit relation of production is a temporary work-based partnership between the two parties to it, whereby they temporarily constitute an actual commodity producer which transcends the two individual parties. In section 2.2 I will

[2] On the commodity form of value see Marx (1867; Part 1, Chapter 1, Section 3), Rubin (1928), Backhaus (1980), Levín (1997) and Ahumada (2012a). On the content of mercantile use value see Levín (1997) and Ahumada (2012b).

[3] On this classification of the functions of money see Ahumada (2013a).

[4] See Ahumada (2013b).

show how the means of payment and back-up reserves are related to each other and that money in its function of means of payment brings about the differentiation of liquidity from solvency. In section 3 I will argue that credit-money is the commoditisation of the driver of the means of payment, and that it can be potentially circulated as currency or sold as an ordinary commodity. I will show that the circulation of existing credit-money is the means through which commodity producers establish temporary trade-based partnerships, whereby all parties involved from the issuance of credit-money until its payment make up an actual temporary trader which transcends the individual parties to it. I will argue that the circulation of credit-money is the origin of the differentiation of the financial aspect of a credit relation of production from its commercial facet, that credit-money is the origin of the convertible token of money and that it makes immediate solvency the subjective mediation of liquidity. In section 4 I will argue that debit-money is the means of payment and sterilisation of commoditised debt. I will show that it is the origin of the system of both settlement of payments and purchases based on debt clearing, and that it therefore is the origin of inconvertible symbols of currency and of bank currency. In section 5 I offer the conclusions.

2. Means of Payment: Measure of Advanced Mercantile Use Value

2.1. Formal Determinations

Money develops the function of means of payment when a commodity producer is willing to buy but not ready to pay yet, because he or she is yet to sell the particular mercantile product which will afford this purchase to the commodity producer. If the seller agrees to sell on deferred payment, a credit relation of production is established and the lifecycle of the commodity of the commodity producer prompting the credit relation takes the below form, where commodity circulation is disregarded.

$$M_{1a}(\text{nominal})\text{-}UVp_1\ldots C\text{-}M \begin{cases} M_2\text{-}UVp_2 \\ M_{1b,3}\ldots \begin{cases} M_{1b} \\ M_3\text{-}UVp_3 \end{cases} \\ M_4 \end{cases}$$

$$\rightarrow M_{1c}\text{-}[\cancel{M_{1a}(\text{nominal})}]$$

M_{1a}(nominal) is the monetary promise that the buyer made to one of the sellers of the particular mercantile product which he or she wished to purchase, and is determined by the quantity of money promised and the future date at which this money is promised. As a quantity of money yet to appear, it is ideal money rather than actual money. However, since not only the buyer but also the seller agrees that the buyer will be able to fetch from the market the quantity of money promised by the promised date, it becomes nominal money. Unlike money of account, which is ideal money because it exists only in the head of the commodity producer as the necessary subjective mediation of his or her trade and labour decisions, nominal money exists in the heads of both the buyer who puts it forward and the seller who accepts it. It thereby gains an external form of existence. However, it does not exist outside the heads of the two parties to it, which makes nominal money ideal money to all other commodity producers, just like money of account. As an accepted promise, the buyer's promise of future money allows him or her to purchase what to the buyer is a particular product-commodity or, equivalently, a particular mercantile product suitable for the buyer's consumption – UVp_1: a particular form of the mercantile use value of the buyer's commodity. Since the buyer's own commodity is yet to attain its universal social form, because it has not realised a mercantile value, UVp_1 is the particular form of the advanced mercantile use value of his or her commodity. M_{1a}(nominal), in turn, is the general form of the advanced mercantile use value of the buyer's commodity, will be the cost to the buyer of his or her advance purchase and mercantile consumption.

Eventually the buyer will have a mercantile product for sale – C – and will become a seller. This product will be the particular, conditional form of the mercantile value of his or her commodity. If the commodity producer is able to sell it, M will be the universal money form of the mercantile value of his or her commodity. Given his or her upcoming payment M_{1a}, the commodity producer will save part of the effective money form of his or her commodity indefinitely as a back-up reserve – M_4. The size of the contingency fund will determine the quantity of money which the commodity producer saves temporarily as a store of means of payment – M_{1b} – in order to meet his or her upcoming payment. The size of the commodity producer's store of means of payment, in turn, will allow the commodity producer to plan future purchases to be made in cash and thereby determines the quantity of money which he or she saves temporarily as a store of means of purchase – M_3. Thus the store of means of payment drives the store of means of purchase, and the sum makes up the commodity producer's store of currency – $M_{1b,3}$, which makes up the total temporary savings of the commodity producer in their universal money form. Temporary savings also include particular, conditional stores of mercantile value. At the planned future date the commodity producer will spend his or her store of means of purchase – M3 – to buy what for him or her is a particular form of the mercantile use value of his or her commodity at that date – UVp_3. The size of the store of currency – $M_{1b,3}$ –, in turn, will determine the quantity of the money form of his or her commodity which the commodity producer has available for immediate purchases in cash – M_2. This is the residual of the money form of his or her commodity. Thus the store of currency will determine which particular mercantile product is a particular form of the mercantile use value of the producer's commodity at the time of sale.

The size of the temporary store of means of payment is determined by the mercantile use value which the commodity producer has effectively realised with his or her advance purchase or, equivalently, by the share of the money form of the producer's commodity which can be imputed to the advance purchase. Due to the immediate independence of the commodity producer, only by chance would the nominal general form of the advanced mercantile use value of the commodity – the promise of future money – match up with its effective general form. If the effective form is bigger than its nominal counterpart, the store of means of payment – M_{1b} – will match up the monetary promise – M_{1a}(nominal) –, the buyer will give this quantity of means of payment to his or her supplier, thereby cancelling his or her monetary obligation to his or her supplier – [$\cancel{M_{1a}\text{(nominal)}}$]. The buyer on credit will pocket the difference between the effective general form of the advanced mercantile use value of his or her commodity and its nominal counterpart. However, whereas the nominal form arose from the buyer's personal expectations, and was validated by the seller's own, the effective form is the result of social reality, which is asserted ex post. If the latter is smaller than the former, the store of means of payment will not be enough for the buyer on credit to honour his or her personal promise to his or her supplier, and therefore the buyer will have to resort to his or her contingency fund – M_4.

If the positive difference between the nominal general form of the advanced mercantile use value of the commodity and its effective counterpart is bigger than its contingent general form of mercantile use value, the buyer will get this difference from his or her hedge, add it to his or her store of means of payment and pay off his or her due. In other words, M_{1c} would be equal to the buyer's dues and the commodity producer would give this quantity of means of payment to his or her supplier in cancellation of his or her obligation to the supplier – [$\cancel{M_{1a}(\text{nominal})}$]. The quantity of money which the buyer expects to make with this difference if spent according to a contingency plan in response to his or her expectations failing to be fulfilled is less than the difference itself. Paying off the debt becomes part of the contingency plan, which includes using up part of his or her personal hoard for unproductive – i.e. domestic – commodity consumption to make up for an unexpected fall in personal income. However, if the contingent general form of this difference is bigger than the difference itself, the buyer will declare him- or herself insolvent to his or her supplier, and the quantity effectively paid – M_{1c} –, though bigger than the buyer's store of means of payment – M_{1b} –, will be nonetheless smaller than his or her due [M_{1a}(nominal)]. In this case, the monetary promise will be cancelled by force, rather than by its being fulfilled. Since the commodity of the buyer realises a mercantile value – if any – after the advance purchase has taken place, it is possible that the buyer's entire hedge, or even the entire money form of his or her commodity – M –, might not be enough to pay off his or her dues.[5]

[5] This debunks the notion of ante-validation held by some Hegelian Marxists, such as Arthur (2005), and some theorists of the monetary circuit, such as Bellofiore (2005). The seller on credit, by accepting the buyer's monetary promise, validates the personal expectations of the buyer regarding the general form of the advanced mercantile use value of the buyer's commodity, and thereby mediates the buyer's subsequent ability to fetch mercantile value – i.e.

For the seller who accepts the particular promise of future money which his or her prospective buyer has put forward to him or her, the circulation of his or her commodity until the promised date of payment takes the below form.

C-M_{1a}(nominal)…M_{1c}

For the means of payment to match up the promise of future money, both the quantity of money collected by the seller in payment and the timing of this collection have to match the terms of the promise. If the seller's customer is forced to request a grace period to pay for his or her advance purchase in full, the total quantity of money paid M_{1c} will be smaller than the monetary promise M_{1a}(nominal), even if it is exactly the quantity of money promised. The reason is that it will have been paid after the date on which it had been promised, and the seller could have used it to fund his or her own commodity consumption, and hence do further mercantile work between the date of sale and the date of collection of the promised payment. In other words, M_{1a}(nominal) is the nominal measure of the mercantile use value of the creditor's commodity, not merely of its mercantile value. Once the seller on credit has received the effective money form of his or her commodity, he or she will allocate it to back-up reserves, stores of currency and current purchases as discussed above for the buyer.

In an atomistic system of production money necessarily arises as the objective measure of every choice an individual has in his or her character as a commodity producer, as well as of the outcome of every decision which he or she has made (Ricardo, 1817). Far from being a veil to the real relations of production (Arrow & Debreu, 1954; Patinkin, 1956; Walras, 1874), it is the means through which social relations of production are established, first of all as the only possible form of existence of the social relation of production and second, as the personal white cane, as it were, of every commodity producer. In its immediacy money is anything but neutral and, properly understood, it could never be super neutral, not even in long-term

money – from the market. However, since a sale is always in the hands of the prospective buyers, a seller on credit would never be able to contribute to an ex ante determination of the mercantile value of his or her debtor's commodity. By extension, chartalists views on money, such as Wray's (1999), are debunked too.

dynamic – or Ricardian (Ricardo, 1817) – system equilibrium. Since money is a homogenous product, only distinguishable by its quantity, the money form of the mercantile value of a commodity and the general form of its mercantile use value, both current and advanced, are nothing but their respective measures as determinate quantities of the money-product. A commodity producer would only try to buy a particular mercantile product on credit, and therefore bring the circulation of his or her commodity forward in time, if the measure to the prospective buyer of the advanced mercantile use value of his or her commodity is bigger than the nominal measure of its advanced mercantile value. The latter measure is the quantity of money which it will cost the prospective buyer to have mercantile use value advanced for his or her commodity. The former measure is the quantity of money which the prospective buyer expects this prospective purchase to bring him or her until the date of payment which he or she is thinking of proposing minus the contingent quantity of money which he or she expects forfeiting the promised amount on the payday will cost him or her. Thus the latter is the cost of the contingency of having to pay a determinate quantity of money regardless of the actual outcome for the buyer of his or her advance commodity consumption.

When a commodity producer puts a particular mercantile product – C – for sale, this product takes the relative form of the mercantile value expressed by the commodity which is embodied in it, because it appears in relation to a determinate quantity of money (Marx, 1867; Part1, Chapter 1, Section 3). The market price of this product – M –, in turn, takes the universal equivalent form of the mercantile value expressed by the commodity. Therefore everybody who has that quantity of money at that particular point in time would potentially be able to buy this particular mercantile product at will if he or she is not beaten to it by someone else. This quantity of money becomes part of the general form of the mercantile use value of their own commodities and the product for sale would count as a prospective particular form of the mercantile use value of these people's commodities – UVp. Somebody without this quantity of money in their hands could still face the seller as the bearer of this quantity of money and take the seller's product off the market at his or her own will. However, lacking the necessary means of purchase, the buyer will only be able to promise the seller a determinate quantity of money at a determinate later date in payment for his or her current purchase.

Money in the hands of the commodity producer is the general form of the mercantile use value of his or her commodity. However, a personal promise of future money is not money, but a particular mercantile product, and formal at that. It is a product which, unlike any genuine mercantile product, does not exist yet, and is therefore inextricably linked to the person putting it forward. As a particular mercantile product, regardless of its type, its owner has to express a mercantile value for it. The promise of future money, that is, the determinate quantity of money promised at a determinate future date, takes on the relative form of the advanced mercantile value expressed by the buyer's commodity. The particular mercantile product which he or she wishes to purchase ahead of the realisation of a mercantile value for his or her commodity, in contrast, becomes the particular equivalent form of the advanced mercantile value expressed by his or her commodity. Within this particular expression of the advanced mercantile value of a commodity, the particular mercantile product which the seller had for sale becomes the general form of the mercantile use value of the seller's commodity. The particular promise of future money, in turn, becomes the sole prospective particular form of the mercantile use value of the seller's commodity.

For the seller his or her commodity has become a determinate quantity of money in its immediate particular form – that is, as C – because formally, he or she has sold it. The particular mercantile product which the seller had for sale has proven to be a particular product-commodity for somebody at its market price. The money of the buyer, in contrast, has turned into a particular mercantile product because it is not currently there but promised for the future. Thus it is entirely up to the seller to decide whether he or she will accept this personal monetary promise to him or her and allow the buyer to purchase on deferred payment. The seller will accept only if the nominal measure of the mercantile use value of his or her commodity, resulting from the buyer's offer, is bigger than the current measure of its market value. Put differently, the seller will accept only if the quantity of money which the seller's commodity is promised to make him or her until the date of payment minus the quantity of money which it would cost the seller not to have the measure of the market value of his or her commodity realised at the moment of the sale is bigger than the quantity of money which he or she expects to make from selling for cash. The quantity of money which the seller would have to spend if he or she failed to realise this price would be the cost of his or her contingency plan. It would therefore come out of his or her hedge, which had been replaced through the sale of his or her previous commodity. Thus the promised premium has to be big enough to make up for the seller's expected loss of money for not realising the sale price of his or her commodity immediately.

Formally, trying to buy a particular mercantile product with the promise of future money takes us back to the accidental expression of the mercantile value of a commodity (Marx, 1867; Part1, Chapter 1, Section 3 A). However, the expression of the mercantile value of a commodity and that of its advanced mercantile value are fundamentally opposed. On the one hand, the expression of the mercantile value of a personal promise of future money rests upon the seller's universal – or money – expression of the mercantile value of his or her own commodity (Marx, 1867; Part1, Chapter 1, Section 3 C), and the formal conversion of the latter commodity into a determinate quantity of money by the willing buyer. On the other hand, if the seller accepts the promise of future money put forward to him or her by the buyer, the seller does not exchange his or her mercantile product for a genuine product-commodity ready for consumption or re-sale but for a merely formal product-commodity. This product is a personal claim to a determinate quantity of money from the buyer at a set date in the future in payment for the buyer's advance purchase, which renders the buyer indebted to the seller until the buyer has paid for his or her purchase. The seller ends up with a personal mercantile product, rather than a merely particular one, because his or her particular buyer is yet to deliver the particular product paying for the purchase. A consummated sale on deferred payment is a credit relation of production, which will only be dissolved once the debtor pays to his or her creditor for his or her advance purchase. This relation is the complement and opposite of the exchange relation of production. Whereas in the exchange relation of production the universal form of the product – the money-product – is the mediation of the particular content of the exchange, in the credit relation of production it becomes the subjective foundation of the particular content of the advance and the terms of its payment.

Exchange is a one-sidedly universal relation of production for the seller, but this relationship is one-sidedly private and particular for the buyer (Marx, 1867; Part 1, Chapter 2). The contradiction is overcome by the buyer handing over the required quantity of the only particular product which is universal in exchange for the particular mercantile product which at the going price is a product-commodity for use for the buyer. By receiving a determinate quantity of the universal product, which is the particular form of the realisation value of a commodity, the particular mercantile product which the seller had for sale becomes universal, and the seller is bound to submit it to its buyer. Purchase on credit, in contrast, is a universal personal relation of production for the debtor and a particular personal relation of production for the creditor. For starters, the prospective debtor would buy from any seller of the particular mercantile product desired willing to accept his or her promise of future money, but the seller can only take up or turn down the particular promise of future money that a particular buyer has put forward to him or her. The creditor gives away the particular mercantile product which is now the universal form of the mercantile value of his or her commodity in exchange for a particular claim for payment against his or her particular buyer. This claim becomes the nominal general form of the mercantile use value of the creditor's commodity. The debtor, in turn, receives what for him or her is a universal product-commodity, that is, the particular mercantile product which if circulated or consumed before the realisation of a measure of mercantile value for his or her commodity, the buyer expects will allow his or her commodity to fetch the biggest quantity of money. In exchange, the debtor has to pledge a determinate quantity of the universal product to the seller, this pledge being not only particular but also personal.

In its immediacy the contradiction between the universal and the private aspects of the credit relation of production is overcome only formally, because the particular facet of the credit relation of production is fulfilled before its universal aspect, and as the means for the latter aspect of the relation to be fulfilled. The offered by the seller has been consecrated as production, but as particular production, rather than social, since the seller has produced exclusively for his or her debtor. The particular purchase of the debtor is no longer a private affair of the buyer, since the debtor will have to turn it into a particular product for sale able to realise a measure of mercantile value big enough to pay off his or her due to his or her creditor. The particularity of the debtor's purchase is no longer its aim; when it becomes an advance purchase, it is merely the means to get the quantity of money promised in payment. Likewise, the particularity of the creditor's acquisition is no longer its aim but the means for the creditor to realise a measure of mercantile value for his or her commodity. However, whether the creditor succeeds depends on whether the debtor does, and whether the debtor succeeds depends one-sidedly on the will of the prospective buyers of the particular product for sale in which the debtor's own commodity is embodied. Specifically, it depends on whether this product is a particular product-commodity for use to any of the prospective buyers at its sale price. This means that the debtor has to be able to establish an exchange relation of production with someone else in order to fulfil his or her credit relation of production with his or her creditor.

If the debtor manages to sell and realise a measure of mercantile value for his or her commodity, his or her commodity will have proven universal. If this measure is big enough for the debtor to be able to pay his or her debt in full, his or her advance purchase will have proven universal, and so will the creditor's own commodity, whereby the credit relation of production would be extinguished, since the contradiction between its private and its universal facets would have been overcome both in form and content. However, if the measure of the mercantile value of the debtor's commodity is not big enough, or is realised later than expected, and the debtor cannot pay his or her debt either in full or in time, the difference between the quantity of money promised and that paid will be the measure of the private character of the credit relation of production. The creditor will have partially produced privately for his or her debtor and would have made a one-sided transfer of money to the debtor for the extent of the difference. Differences in the timing of payment, in turn, are measures of the private character of the timing of the credit relation of production. It will entail a forced money charge on the creditor equal to the cost of the contingency plan between the promised date of payment and its effective date of payment. The credit relation of production is the means through which a debtor and his or her willing creditor attempt to establish an exchange relation of production as an internally differentiated unity. However, the subjective foundation of the credit relation of production – money – is still the objective mediation of the system of commodity production.

Whether they manage to establish the sought exchange relation successfully will be determined ex post. Thus the credit-relation of production drives the exchange relation of production but the latter is the objective foundation of the former.

The credit relation of production is a temporary private relation of production between the creditor and his or her debtor in order that the debtor might be able to establish a social relation of production and thereby consecrate their private relation as social. This highlights the fact that the credit relation of production is the means through which the two parties to it establish a temporary work-based partnership, and in so doing they set up a temporary actual commodity producer which transcends both individual parties to it. Because the relationship is based on the immediate independence of commodity producers, it is asymmetrical. The prospective creditor has the power to establish or reject the credit relation of production put forward to him or her one-sidedly because he or she will immediately produce for the prospective debtor. However, the debtor can only produce for his or her creditor in general and pay off his or her debt if he or she is able to produce for someone else in particular, that is, to offer a particular product suitable for someone else's use. Therefore, the creditor will be able to his or her endowment of products as he or she pleases after establishing the credit relation of production, because the creditor has done his or her part, but the debtor will not enjoy unrestricted liberty, not even immediately.

Since the commodity producer is formally private and independent, the creditor will not be able to force his or her debtor directly to do anything for him or her. The creditor would also have no knowledge of his or her debtor's endowment of products or of the debtor's management of it because this lies within the private sphere of the debtor. However, the debtor will be personally bonded to his or her creditor for the amount of the debt, which the debtor must pay by the agreed set date. This is the mediation which allows the creditor to govern his or her debtor's decisions in a system which rules out personal relations of dependence. Formal independence is the mediation through which the debtor submits to his or her creditor and the creditor emerges as dependent on his or her debtor. Because the debtor has already obtained what he or she needed from his or her creditor and is independent of his or her creditor, at least temporarily, his or her creditor has to subdue him or her. Within this temporary actual commodity producer, the creditor has already done his or her work. Through the creditor's future claim on the debtor for a determinate quantity of money the creditor will indirectly force the debtor to play the role of trader for the creditor, so that the debtor can fulfil his or her obligation to the creditor. In so doing, the creditor in his or her role of trader will govern the work of the creditor. Thus in the temporary actual commodity producer, it is only the debtor who plays the role of mercantile worker and trader, and at the behest of the creditor, because through the debtor's advance purchase from his or her creditor, the debtor has determined that the creditor had already done his or her part on his or her own account.

A proposed temporary work-based partnership is the origin of the credit relation of production, which sets up an actual temporary commodity producer. The setting up of an actual commodity producer transcending the individual parties to it is the socialisation of the commodity producer mediated by the formal independence of its component parts, which gives rise to a relation of command and submission within the actual commodity producer. This socialisation encourages the development of the credit relation of production and drives the formation of commercial chains of payment, which is nothing but the manifestation of individual commodity producers being pooled together to make up a pooled temporary commodity producer. A debtor will also be somebody else's supplier and creditor, and a creditor will be somebody else's customer and debtor. However, since a creditor can only command his or her debtor, and is always commanded by his or her own creditor, a pooled commodity producer has multiple seats of command, which are immediately uncoordinated with one another. The origin of the failure of a credit relation of production is the uncertainty of sales but is mediated by the formal independence of the debtor from his or her creditor. The formal independence of the seats of command within a pooled commodity producer is the driver of a payment crisis within one such pooled producer.

2.2. The Relationship Between the Means of Payment and Back-Up Reserves

Due to the conditional character of the credit relation of production, there is one relationship between the back-up reserve function of money and its function as the means of payment which is immediate. If the commodity producer were unable to save money indefinitely as a contingency fund, he or she would never attempt to purchase before the realisation of a measure of mercantile value for his or her commodity. The hedge gives the commodity producer some security that he or she will be able to pay for his or her advance purchase and, more importantly, continue to have a process of mercantile reproduction if his or her personal expectations are not fulfilled. His or her domestic hoard, in turn, will offer the commodity producer some security that he or she will be able to reproduce his or her domestic conditions of reproduction despite the unexpected fall in personal income following upon the botched realisation of the mercantile use value of his or her advance purchase. More importantly, the hoard will offer the commodity producer some security that he will be able to free up the necessary quantity of labour capacity to carry out his or her contingent mercantile reproduction. In this regard, back-up reserves are not only the foundation which will encourage commodity producers to become indebted but they will also determine the effective quantity of means of payment which a debtor hands over to his or her creditor in fulfilment of his or her promise in the event of a contingency. The relation is direct between the hedge and the quantity of money paid but rests on the domestic hoard of the debtor.

Likewise, the commodity producer would be unwilling to accept the promise of future money put forward by a buyer, unless he or she knew that the buyer would be potentially able to tap on a contingency fund and pay off his or her dues despite unfulfilled expectations. More importantly still, the seller would be unwilling to establish a credit relation of production in the role of creditor if he or she had been unable to build up a contingency fund for the event that his or her prospective debtor might be unable to pay the current measure of the market value of the creditor's commodity, let alone the total quantity of money promised. The contingency fund of the creditor should be big enough to make up also for the expected contingent money cost of an unexpected increase in prices by the time of collection. If the debtor fails to pay in full or in time, the quantity of the hedge which the creditor will use at a point in time to make up for the difference will play the role of gap means of payment. The quantity which he or she will have to use in the event of an unexpected rise in prices will play the role of gap means of purchase. These quantities will drive the creditor's domestic hoard for unproductive commodity consumption.

Given that it is possible that there should be a contingent mediation between payments outstanding and back-up reserves, commodity producers have to find their own personal optimal relationship between the measure of the credit relation of production and the measure of their hedge. The reason is that contingent means of payment and contingent means of mercantile purchase will be drawn from these hedges. A commodity producer will try to make an advance purchase only if the measure of the advanced mercantile use value to the prospective buyer of his or her as yet non-existent commodity is bigger than the nominal measure of its advanced mercantile value. The latter quantity of money is nominal because the prospective debtor does not have it yet. The choice for the prospective debtor is between increasing his or her purchases beyond his or her current means of purchase or sticking to his or her immediate budget constraint. The seller will only accept a particular promise of future payment if it makes the nominal measure of the mercantile use value of his or her commodity to him or her bigger than the current measure of its market value. This means that the nominal quantity of money which the prospective creditor is promised minus the quantity of money which he or she expects that not having the money form of the current sale price of his or her commodity will cost him or her is bigger than the current sale price of his or her mercantile product. The choice for the prospective creditor is between realising the money form of his or her commodity currently or put off its realisation in the hope that it will slacken off the budget constraint afforded by his or her commodity. The measure of the mercantile value of the debtor's commodity being nominal highlights the fact that money as a means of payment makes up a difference-in-unity to the debtor, because the fulfilment of his or her credit relation depends on his subsequent success to establish an exchange relation of production, which is out of the debtor's hands. The measure of the mercantile use value of the creditor's commodity being nominal, in turn, highlights the fact that accepting money as a future means of payment rather than as a current means of purchase makes up a unity-in-difference which is merely formal. The effective realisation of this unity-in-difference is in the hands of the debtor.

The realisation of a measure of mercantile value for a commodity is always uncertain, which makes the realisation of the expected measure of the mercantile use value of the commodity whose consumption gave rise to the one for sale uncertain. This creates the risk that the commodity producer might be unable to reproduce his or her material conditions of life. Nevertheless, the commodity producer cannot charge the perceived money cost to him or her of this risk other than randomly as the result of successful arbitraging, because he or she enters the market at his or her own risk. The cost is borne by the commodity producer and is manifested in the size of his or her contingency funds. However, due to the fact that the realisation of the nominal measure of the mercantile use value of the creditor's commodity is in the hands of the debtor, the situation changes with the credit relation of production. The debtor cannot charge any cost because he or she is free to pay whenever he or she deems it convenient as long as it is by the promised payday. The creditor, in contrast, cannot consume or try to make any money with his or her commodity until the debtor pays. Therefore the creditor has to form an expectation on the measure of the contingent mercantile use value of his or her commodity to determine the reserve price below which he or she will not sell on credit. This is why putting a value on the cost of mercantile risk, rather than on mercantile risk itself,[6] becomes a central issue to credit theory. However, this cost is borne by the debtor and remains within the temporary actual commodity producer set up through credit. In other words, this cost is personal, and therefore remains private, and is borne by the debtor because he or she does not have enough reserves to afford the purchase.

Money as the promise of means of payment made by the debtor drives the optimal size of the debtor's hedge at the time in which he or she expects to realise the measure of the mercantile use value of his or her advance purchase. The latter will drive the current optimal size of his or her hedge. The optimal size of

[6] Mercantile risk is the flip side of the mercantile uncertainty (Keynes, 1936) surrounding the sale of every mercantile product. Thus it is absolute and therefore unmeasurable.

the future and the current hedge will drive the future and the current optimal size of his or her domestic hoard, because in expanding or contracting his or her scale of mercantile reproduction, it will demand more or less working time from the sphere of domestic labour, and hence more or less unproductive commodity consumption. The means of payment as the promise received by the creditor drives the current optimal size of the creditor's hedge, which, in turn, will drive the optimal size of the creditor's hedge at the promised time of payment. The current and the expected future size of the creditor's hedge drives the optimal current size and the expected optimal future size of his or her hoard for the same reasons as it does for the creditor.

The arguments developed in this section so far mean that money as the means of payment is the mediation through which private back-up reserves are made objectively social. If the expectations of the debtor are not fulfilled, the debtor will use part of his or her hedge just to pay his or her creditor, that is, he or she will transfer part of his or her hedge to his or her creditor. As a result, there would be less available hedge to sustain the personal income of the commodity producer – already reduced because of unfulfilled expectations – which will force the debtor to use an additional part of his or her hoard for domestic purchases, just because he or she has used part of the hedge to pay the creditor. This additional share of his or her hoard underpins the hedge transfer to the creditor – otherwise the debtor would have been forced to make a smaller payment out of his or her hedge – and is made available to the sellers of the products which he or she buys for domestic consumption. If the debtor fails to pay in full or in time, the quantity of the hedge which the creditor has to use as gap means of payment from the debtor for the creditor's own mercantile purchases is as a matter of fact put on behalf of the debtor as the balance necessary to settle the forcefully extinguished credit relation of production. This balance will be made available to the seller of the mercantile products which the creditor purchases as means of mercantile labour. The reduced hedge as a result of the failure of the debtor to pay off the debt will force the creditor to use a quantity of the hoard for domestic purchases which he or she would have not used otherwise. However, back-up reserves are not only socialised through contingency but as the result of individual optimisation. Furthermore, their contingent socialisation rests on their voluntary socialisation, because the former springs from the credit relation of production.

When a seller agrees to sell on credit, he or she advances the entire money form of his or her commodity to his or her debtor for the duration of the credit contract. This comprises the replacement of the hedge of the creditor for the sphere of mercantile labour, the mercantile store of currency, the domestic store of currency and the addition to the producer's hoard for the sphere of domestic labour. The last two make up the personal income of the creditor, and all four are in immediate unity in the particular form of the mercantile product sold on credit. Nevertheless, it is easy for the creditor to figure out how much of his or her hedge and his or her hoard he or she has advanced to his or her debtor through the sale on credit. Since the optimal size of the hedge is a constant and part of the effective measure of the realisation value of a commodity is used to replace the hedge, whereby the remainder of the current hedge becomes part of the store of currency for mercantile expenditure, the planned expenditures which have to come out of this hedge due to the deferred collection of the sale price is the creditor's hedge advance to his or her debtor. Since the domestic expenditure of the commodity producer comes out of his or her domestic store of currency, his or her hoard expenditure originating exclusively for the deferred collection of payment, rather than from a contingency, is the creditor's hoard advance to his or her debtor. In the hands of the debtor, this advance becomes currency for expenditure, which manifests itself in the creditor spending it and the debtor consuming or re-selling his or her advance purchase. When the debtor realises the measure of the mercantile use value of his or her advanced purchase and pays for this purchase, the debtor gives to the creditor the money form of the creditor's commodity, which includes the return of the advance of back-up reserves, the means of the creditor's planned expenditures and the means of expansion of his or her domestic hoard.

Through the credit relation of production back-up reserves are socialised despite their being shared only by the two parties to the credit relation because the prospective creditor can promise future money in payment to any of the sellers of the particular mercantile products which he or she wishes to buy. The prospective creditor, in turn, has the liberty to accept whichever promise which he or she deems profitable. Just like with the exchange relation of production, which connects two individual commodity producers and is the only social relation of production in commodity production, the commercial credit relation of production, which temporarily binds up a buyer to his or her seller, is the only form of socialisation of reserves. The reason is that both parties are completely unconstrained when selecting their temporary work partners. In commodity production, the most universal – or macro – forms of mediation arise from, while at the same time drive, the most atomistic – or micro – relations of production. If the origin of payment crises within a commercial chain of payments arises from the conditional character of the credit relation coupled with multiple, formally independent seats of command within an actual commodity producer, its foundation is actually pooled back-up reserves, the different shares of which are managed privately.

The socialisation of back-up reserves coupled with the private management of its different component parts gives rise to the differentiation of liquidity from solvency. Liquidity becomes the objective means to solvency. Any commodity producer currently lacking the means to purchase a particular mercantile product will be insolvent for that purchase. Furthermore, this product would not be a particular form of the mercantile use value of his or her commodity because it would lie outside his or her planned expenditures. However, if the commodity producer expected to be able to afford this product by buying first and paying later in convenient terms, this product would become a particular form of mercantile use value to him or her. If the prospective buyer's offer of future money to one of its sellers rendered the nominal measure of the mercantile use value of the seller's commodity bigger than the current measure of its market value, this seller would regard the prospective buyer as temporarily illiquid, rather than insolvent. The seller will provide liquidity to the buyer by selling to him or her on credit, and the form of this liquidity will be the particular mercantile product which the buyer wishes to buy from him for use. This particular product will be the means of the buyer's formal solvency at the time of purchase, and he or she will have to turn it into the means of his or her effective solvency through its re-sale or its consumption to make a product for sale in order to be able to pay for it. However, since the measure of the effective mercantile use value of a product is only asserted ex post, so is the debtor's solvency.

Whether an illiquid buyer was actually solvent will be decided by his or her actual liquidity at the time of payment and his or her ability to have sold on credit – that is, to have provided liquidity to someone else – as an additional formal mediation to make this payment. If the debtor is reluctant to sell on credit, this might be a sign of his or her insolvency, rather than of him or her being put forward unattractive monetary promises, but as long as he or she manages to pay his or her dues in full and in time, the debtor will come out as objectively solvent. Only the debtor him- or herself would know whether he or she is solvent, because only the debtor would know whether he or she had to resort to his or her hedge unwillingly to be able to pay off his or her advance purchase, and whether he or she had to resort to the hoard to ensure his or her domestic reproduction. However, if the debtor fails to pay in full or in time, his or her illiquidity at the time of payment will now be the objective form of existence of his or her insolvency, regardless of whether he or she actually is insolvent or has merely decided to swindle his or her creditor because the measure of the contingent mercantile use value of his or her due may have resulted bigger than the measure of its mercantile value. Thus the differentiation of liquidity from solvency passes ex ante insolvency for illiquidity and can disguise ex post insolvency as ex post liquidity if the commodity producer had a hedge big enough to fulfil his or her monetary promise in time and form. It can also pass ex post illiquidity for insolvency and therefore mask swindle.

3. Credit-Money: The Difference-in-Unity of Measure of Mercantile Use Value of a Money Advance and Nominal Measure of its Mercantile Value

Credit-money is the commoditisation of the promise of a determinate quantity of money at a set date in the future which an illiquid buyer puts forward to a seller in order to purchase on credit and become the seller's debtor. This is achieved through the securitisation of the monetary promise, that is, the addition of collateral to the personal promise of future money as a security that the creditor will be able to realise the quantity of money promised to him or her in payment for his or her sale.

In section 2.1 above it was argued that money which appears in payment for an advance purchase is the nominal measure of the mercantile use value of the debtor's commodity. It was pointed out that the means of payment has to undergo an internal split. It has to become the difference-in-unity of formal measure of the advanced mercantile use value of the prospective debtor's commodity and the nominal measure of its advanced mercantile value for it to be able to play the role of effective measure of the realisation value of the creditor's commodity and nominal measure of the advanced mercantile use value of the debtor's commodity on the date payment is due. Thus the seller on credit advances mercantile use value to the buyer in the particular form of the mercantile product which he or she has for sale, which the buyer had signalled that it was the particular form of mercantile use value to him or her by taking the product off the market as a buyer and offering future money in payment. However, for the seller this product is just a means of exchange, or the conditional particular form of a determinate quantity of money. For the buyer, in turn, it is the particular product-commodity whose use as a means of mercantile labour or as a means of exchange the buyer expects will allow him or her to fetch not only the quantity of money promised to the seller by the payday but also the biggest possible quantity of money by the said date. Since the advance purchase is a means to money, and the buyer knows that money is the general form of mercantile use value because it is the means of purchase, the buyer knows that what he or she is requesting the seller is the advance of a determinate quantity of his or her money for a set period of time. This advance is being requested in the particular form of money for the seller and the particular form of the means to money for the buyer.

Once the prospective buyer has understood the underlying content of his or her attempted advance purchase, he or she will offer credit-money as a nominal means of purchase, rather than the mere promise of future payment. The main difference between the two is that credit-money is a general personal bond to the commodity producer's creditor, rather than a particular one. The prospective buyer on credit will promise a determinate quantity of money at a set date in the future to whoever holds the claim on him or her, rather than to his or her personal supplier. The prospective debtor makes this prospective general personal bond the subjective mediation of a particular personal bond by offering it to one of the sellers of the particular mercantile product which he or she wants. Though the personal bond of the debtor to his or her creditor never expires until the terms are fulfilled, because the claim on the debtor is impersonal, so that if its holder dies, the claim does not die with him or her, the prospective creditor expects to obtain better conditions of payment with credit-money, because it is transferrable. As a result, the driver of the means of payment acquires a general character, and a commodity producer will offer to issue credit-money as a nominal means of purchase if the formal measure to him or her of the mercantile use value of the money advance underlying a prospective advance purchase is bigger than the nominal measure of its mercantile value. The quantity of money which the prospective debtor expects to make with the money advance minus the quantity of money which he or she expects will cost him or her no longer to have the quantity of money given in payment is bigger than the quantity of money which he or she has promised to pay.

The externalisation as credit-money of the difference-in-unity driving the means of payment will not in itself make the prospective creditor any more willing to take a particular credit-money than the particular promise of payment made by the prospective buyer. If a buyer on credit fails to pay in full or in time, he or she is likely to lose his or her supplier. It might prove difficult for the buyer to find another seller of the same type of mercantile product willing to sell it on deferred payment at the time the prospective buyer needs to make an advance purchase, or the prospective buyer might have to offer more money at a closer date in the future. The debtor has an incentive to fulfil the terms of a commercial credit relation, but if his or her credit-money ends up in hands other than those of a supplier of his or her, the debtor will have very little incentive to pay a quantity of money to a creditor from whom he or she needs nothing. The credit-money which the prospective buyer offers to issue must be backed by collateral as a security to its holder that he or she will be paid back his or her money advance and paid for the advance itself.

Collateral is a particular collection of conditional stores of mercantile value which the prospective debtor owns and which he or she pledges to the prospective creditor in the event that the debtor might fail to redeem his or her credit-money in full on the date it is due. The items making up the collateral are meant for either sale or direct use by the debtor upon the debtor's honouring of the promise. On the one hand, this will reassure the prospective creditor of the prospective debtor's incentive to fulfil the contract. On the other hand, it will act as a security against losses if the debtor defaults upon the credit-money which he or she issued, since the debtor will thereby forfeit ownership of the collateral to the creditor for the latter to dispose of it as he or she sees fit. Thus the offer of credit-money will be determined by the quantity of money which the prospective debtor promises, the date at which he or she promises to pay and the security which he or she offers.

A seller offered to be issued credit-money first looks at the collateral backing this credit-money and assesses whether the measure of mercantile value which he or she expects the collateral to have at the date of redemption of this credit-money is at least as big as the quantity of money promised in payment. If it is not, the seller will turn down this credit money, but if it is, the seller will still only accept this credit-money if the nominal measure to him or her of the mercantile use value of the money advance requested of him or her is bigger than its current measure of mercantile value. This will be the case only if the quantity of money promised to the seller for his or her money advance is bigger than the quantity of money which he or she expects will cost him or her not to hold on to the quantity of money which the buyer wishes to borrow from him or her. This is the cost of the contingency plan of the seller, and it will be lower if the seller deems the security of the credit-money to be good than it would otherwise be. The reason is that the seller would be confident to be able to transfer the claim to someone else if he or she needs to realise a measure of mercantile use value for his or her money advance before the stipulated payday.

With the issuance of credit-money, the lifecycle of credit-money or, equivalently, of the driver of the means of payment for its issuer takes the below form.

$M_{1a\ (nominal)}$-UVp_1…[$M_{1a\ (nominal)}$]

$M_{1a\ (nominal)}$ is the quantity of money promised at a determinate date in the future with which, when discounted to the current date, the prospective debtor expects to buy the particular form of the advanced mercantile use value of his or her commodity – UVp_1. At the proposed date of redemption of this credit-money, it will become an outstanding balance – [$M_{1a\ (nominal)}$] – for the quantity of money promised. As a result, the driver of the means of payment differentiates from it as credit-money. At this stage, the differentiation is only formal because the issuance of credit-money mediates exactly the same relation of production as the particular, personal promise of future money did: an advance purchase.

The offeror of a particular credit-money puts a new mercantile product in the hands of the recipient of the offer which is made out of money in the recipient's hands: the money advance. The commodity producer being put forward a particular credit-money is given the choice to use the quantity of money currently requested of him or her – even if in the particular form of the product for sale – as an advance to the offeror for the period stipulated in the offer or to hold on to it as a hedge. If the recipient of the offer accepts the credit-money offered, he or she mediates the creation of this credit-money as a self-standing mercantile product. In a credit relation of production, its particular content – that is, the particular mercantile product sought on credit and the particular personal promise of future money – becomes the subjective mediation of its universal moment – the quantity of means of payment effectively dissolving this relation. With the differentiation of credit-money, it is two particular products directly made out of the universal product – money – that become the particular content of the credit relation of production. The offer of credit-money as the embodiment of a determinate quantity of money at a particular date in the future backed by a particular collection of conditional stores of money gives the recipient the possibility to make an advance of a determinate quantity of existing money until this particular future date. If the recipient accepts, he or she makes this particular advance to his or her debtor and will receive a particular claim on the issuer to a determinate quantity of money at the date of expiry of this credit-money.

Due to the fact that a credit-money is a commoditised particular claim on future money or, equivalently, self-standing commodity-money, it is a formal mercantile product, rather than a genuine one. Put differently, it is a nominal store of mercantile value, rather than a conditional one, because the money promised is still to be made and ownership of its collateral is still to be transferred to its holder. It is the fact that credit-money is merely a future claim that gives rise to the notion of discounting, because its holder will not be able to either consume it as the means to making money or use it at will as a means of exchange. Since the recipient of credit-money is given the promise of a determinate quantity of money at a particular future date, the only way for the recipient of the offer to make money out of this fixed nominal outcome is to make sure that the sale price of the product for which he or she might accept this credit-money as a nominal means of purchase is low enough. The discount offered for a particular credit-money is the only potential way of making money for the recipient of the offer. By reaction, the subjective measure of the mercantile use value of all mercantile products – that is, the quantity of money which the commodity producers expects to make through their use net of the contingent quantity of money which it would cost the commodity producer not to have a quantity of back-up reserves equal to their respective sale prices – is now the subjective measure of their discounted mercantile value. The rate of discount is determined by that offered to the commodity-producer for accepting credit-money. Because a particular credit-money is only the subjective foundation of the particular money advance which would allow this credit-money to get into the hands of the recipient of the offer, it is obvious that the nominal yield of the money advance is just the flip side of the nominal cost of offering credit-money. The nominal yield of a particular money advance can only be the difference between the face value of the credit-money offered to the prospective creditor and the market price of the particular product which the prospective debtor seeks to acquire with this credit-money.

Once a seller has a particular credit-money in his or her hands and has become a creditor, he or she might decide to try to use it either as currency or as a means of exchange before its date of redemption, since the claim on its issuer is a self-standing mercantile product. If the creditor decides to pass credit-money on, it is because the measure of mercantile value which he or she expects to realise for this credit-money has become bigger than its nominal measure of mercantile use value to him or her. The quantity of money which the creditor expects his or her money advance to make him or her net of its contingent money cost for not having that quantity of money in reserve drops below its expected current money cost, which the creditor thinks he or she might be able to impose on someone else for acquiring this existing credit-money. The contingent quantity of money that the discount differential between that one received and that one offered in order to pass on this credit-money is expected to cost the creditor is less than the discount differential itself. If the recipient or any of the recipients of the current creditor's offer of credit-money accepts it, which would only happen if the nominal measure of the mercantile use value of this credit-money to any of them is bigger than its current measure of mercantile value, the circulation of the creditor's commodity would take one of the below forms.

1.a) $C\text{-}M_{1a\ (nominal)}\ldots M_{1a\ (nominal)}\text{-}[\cancel{M_{2\ (nominal)}}]$ if credit-money is circulated as a means of payment.

1.b) $C\text{-}M_{1a\ (nominal)}\ldots M_{1a\ (nominal)}\text{-}UVp_2$ if credit-money is circulated as a means of purchase.

2) $C\text{-}M_{1a\ (nominal)}\ldots M_{1a\ (nominal)}\text{-}M_3$ if credit-money is sold as an ordinary commodity.

In forms 1.a and 1.b the holder of credit-money circulates it as currency – as a means of payment and as a means of purchase respectively – whereby this credit-money plays the role of currency-credit. In other words, it circulates as currency because it is the embodiment of a claim against its issuer, and it indicates that its holder has a credit for the face value of the credit-money in question. This is the origin of convertible tokens of money or, equivalently, of collective currency as a bill of exchange. For the holder of credit-money to be able to circulate it as currency, he or she can offer it only to one person. If the holder of this credit-money wishes to use it as the means of payment of his or her own advance purchase, he or she has to offer this credit-money to the particular holder on payday of the claim on him or her arising from his or her advance purchase. If the holder wishes to use it as a means of purchase instead, he or she has to offer this credit-money to one of the sellers of the particular mercantile product which he or she wishes to buy. In form 2 the holder of credit-money puts it for sale on the market at a price. In this case, the holder of credit-money is after a determinate quantity of back-up reserves. Due to the necessary discounting of credit-money, the face value of a credit-money will be higher than that of the debt the holder of credit-money wishes to cancel with it – [~~$M_{2\ (nominal)}$~~]. It will generally be higher than the sale price of the particular mercantile product which he or she wishes to purchase with this credit-money – UVp_2 –, though it could also be lower if he or she manages to buy this product at a discount, whereby he or she would have circulated the credit-money in his or her hands at a premium. The face value of the credit-money will also be bigger than the quantity of money obtained from its sale as an ordinary commodity – M_3.

The holder of a particular credit-money will try to circulate it as a means of payment if the measure of its advanced mercantile use value to its holder is bigger than its expected measure of mercantile value. The quantity of money which the holder has made with the credit-money he or she issued minus the contingent quantity of money which it would cost him or her to forfeit the means of payment of the credit-money issued is smaller than the price which he or she expects to get from his or her creditor for his or her claim on someone else. Credit-money will be circulated as a means of purchase if the measure of the mercantile use value to its holder is bigger than its expected measure of mercantile value. The quantity of money which the holder expects to make through his or her purchase minus the contingent cost of forfeiting the money equivalent of the price of the purchase is less than the price which the buyer expects to get from the seller for the credit-money in the buyer’s hands. If neither case holds but the expected measure of mercantile value of a credit-money is still bigger than its nominal measure of mercantile use value to its holder, it means that its contingent measure of mercantile use value to its holder is bigger than the expected measure of its mercantile value. In this case, the holder of credit-money will put it for sale and keep the proceeds as a contingency fund. In common parlance, its holder will be after liquidity.

Through the circulation of existing credit-money financial credit differentiates itself from commercial credit not only in form but also in content, and emerges as the driver of commercial credit. The offeror of existing credit-money in his or her endowment gets a money advance from the acquirer of it of a size equal to the realisation price of this credit-money. This quantity of money advanced will be in the particular form of the claim sterilised if used as a means of payment, in the particular form of the mercantile product purchased with it if used as a means of purchase or in the particular form of a determinate quantity of the universal product if sold for cash. The advance of money from the acquirer of credit-money to its offeror will be instantaneous, because the offeror will be handing his or her claim on the issuer of this credit-money over to its new owner, whereby its previous holder will pay the new one for the money advance received. The price will be the difference between the discount at which he or she had received it from its issuer and the discount which he or she had to offer to its new owner for the new owner to acquire it. Through the instantaneous money-advance to the offeror of credit-money, its new owner gets his or her money advance sunk in the credit-money acquired until its date of redemption.

Contrary to Marx's claim (1894; Part 5), discounting entails a genuine advance of money. When credit-money is discounted as a means of payment or as a means of purchase, its holder seeks in order to bring forward in time its advanced mercantile use value and its mercantile use value respectively. When discounted as an ordinary commodity, in turn, the holder of credit-money seeks to bring forward in time the realisation of a measure of mercantile value for his or her commodity for its own sake. In the first two cases the holder of credit-money wants to bring forward in time either the realisation of the advance consumption of his or her commodity or the consumption of the remainder of this commodity, whereas in the second case the holder of credit-money only wants to bring forward in time saving his or her commodity indefinitely. Discounting is the most general form of financial credit or, equivalently, the form of its differentiation from the commercial facet of the credit relation of production, and breaks down a money advance into an actual advance to the offeror of credit-money and a formal advance to its issuer.

Through the financial credit relation of production the holder of an existing credit-money establishes an instantaneous trade-based partnership with its acquirer, whereby the latter establishes a temporary trade-based relationship with its issuer. This is the origin of the differentiation of the role of financier from that of lender as the mediation of the role of lender. Thus a triangulation takes place: a seller being offered credit-money for an advance purchase finances the purchase of his or her customer only to transfer the claim on the issuer, and hence the credit relation of production, to a third party. As a result, the third party ends up being the actual advancer of money or, equivalently, the lender. The financial credit relation of production allows the issuer and the final holder of credit-money to set up an actual temporary trader through the mediation of its initial holder which transcends the three individual parties to it.

The role of trader is the driver of the mercantile worker and they both make up the commodity producer as a unity-in-difference, but when the roles are actually separated through the credit relation of production, the two roles make up a difference-in-unity instead, that is, a difference whose unity is only asserted ex post. Through the establishment of the commercial credit relation of production, the seller on credit makes his or her debtor produce for him or her in general, because the creditor has already produced for his or her debtor in particular. Thus the creditor keeps the driving role of the trader within the temporary actual commodity producer and indirectly governs the mercantile work of the debtor by making him or her play the role of trader to realise a measure of mercantile value for the product of this work and hand over the debtor's due to the creditor. Through the establishment of the financial credit relation of production, in turn, the commercial creditor relinquishes the driving role to the financial creditor. The commercial creditor in his or her role of trader has to trade for the financial creditor in general because the latter has already traded for the commercial creditor in particular and advanced the commercial creditor the quantity of money which he or she needed. The commercial creditor does this instantaneously by handing over his or her claim on the issuer of the credit-money. In so doing, the former creditor no longer has to play the role of trader for somebody else and can no longer make the debtor produce for him or her in general. Now the debtor has to trade for the new creditor in general and hand over his or her dues to the debtor, because the new creditor has already traded for the debtor in particular through the mediation of the commercial creditor. In other words, the new creditor has not given the debtor the particular mercantile product whose use the debtor needed to bring forward in time, but he or she has advanced the debtor the quantity of money which he or she needed to afford the debtor's advance purchase. The debtor will only be able to trade for his or her creditor in general if the debtor had been able to produce for his or her supplier in general. In other words, the debtor will only be able to pay off his or her debt if he or she were able to pay for his or her advance purchase.

The commercial credit relation of production is the means to socialising existing back-up reserves. The financial credit relation of production is the means to pooling them either within a temporary actual commodity producer if credit-money is used as a means of payment or within the commodity division of an existing mercantile working process if credit-money is used as a means of purchase. If credit-money is sold as an ordinary commodity, in contrast, credit-money is the means to collectivising existing back-up reserves, since it is an appeal to the reserves of the entire market. Due to the fact that the different parts of back-up reserves are managed privately by its immediate owners, these different types of pooling make it more feasible for there to be payment crises. A commercial chain of payments makes up a temporary actual commodity producer with a seat of command over a particular part of the fragmented commodity producer in each creditor. If credit-money is circulated as a means of payment, a link in the commercial chain of payments is skipped, and command is transferred from one creditor to another. By this token, the first creditor relinquishes his or her command of his or her debtor in exchange for freedom from the command of the second creditor, who thereby gains command over the first creditor's debtor. The first creditor appears as formally independent when, in terms of mercantile work-based partnership, he or she is dependent on the second creditor. The command of the second creditor over the remaining debtor, in turn, is only formal, because the debtor actually depends on his or her original creditor. The formal independence of the intermediate links of the commercial chain of payments is the source of the increase instability. Nevertheless, owing to this independence, they would be spared from the payment crisis.

If a credit-money is circulated as a means of purchase, the command over a debtor is transferred to a member of another temporary actual commodity producer within the commodity division of an existing mercantile working process. This seat of command would not only be merely formal but also lie outside the actual commodity producer where it arose. This creates the risk of contagion of a payments crisis within a commercial chain of payments into another one. Finally, if credit-money is put up for sale, it can potentially tap on anybody's contingency funds, not only their mercantile fund – the hedge – but mainly their domestic fund – the hoard – because it is the truly idle fund. Unlike the hedge, which is actively adjusted according to mercantile expenditure prospects, the hoard expands passively as the residual between personal income and domestic expenses. This means not only an abundance of idle funds for discounting but also that the temporary command over a debtor might shift to any point in the system, both outside the commodity division of an existing working process but also outside the sphere of mercantile labour and into the sphere of domestic labour. As a result, the potential for contagion is universalised. A payments crisis can now develop into a full blown credit crisis. Thus the possibility of credit crises is driven by shifts in the temporary seats of command of a temporary actual commodity producer out of this producer and rests on the actual pooling of back-up reserves while keeping their immediately private form.

When money develops the function of means of payment, individual liquidity becomes the subjective mediation of individual solvency. With the circulation of credit-money, in turn, immediate individual solvency becomes the subjective mediation of individual liquidity. Now shortage of liquidity at a particular point in time when a commodity producer needs it passes for individual insolvency. The creditor will have to turn his or her future promised liquidity, determined by the quantity of money to which he or she has a claim, the date at which this claim can be redeemed and its security into current individual solvency. The creditor could potentially pass his or her current illiquidity for solvency because it is not him or her who promises to pay in the future but has an agreed upon claim to a determinate quantity of money at a determinate date in the future on its issuer. More importantly still, this claim is backed by the particular collateral of the particular credit-money which the creditor holds. In other words, unlike the commercial credit relation, the financial one is backed by a particular collection of conditional stores of mercantile value, that is, by existing genuine mercantile products which have the potential to fetch money from the market. This is why also the issuer – and not just the holder – of credit-money could potentially turn his or her current illiquidity into solvency, since he or she owns the collateral offered with the credit-money which he or she would like to issue. Whether the immediate illiquidity of the commodity producer can be passed as solvency in the guise of insolvency will be determined by the timing in which liquidity or else, the collateral, is promised to be made available and by the quantity of liquidity promised and the expected sale price of the collateral at that time if the promised liquidity fails to be delivered. Thus the solvency of an individual commodity producer can only be determined by the recipient or recipients of the offer of a particular credit-money, that is, by how much the purported solvency of the offeror is the particular form of the expected realisation of the liquidity of the recipients of the offer.

If the commodity producer manages to assert his or her immediate individual solvency through credit-money, this solvency will be the mediation of his or her formal liquidity. This liquidity will be determined by the quantity of debt paid off with the circulation of his or her credit-money, the particular mercantile product for use acquired with it or the quantity of back-up reserves fetched with it from the market. The commodity producer will have to use his or her consummated formal solvency as the means to generating liquidity for him- or herself. The commodity producer will attempt this by consuming commodity products in order to make others for sale, by re-selling some of the mercantile products acquired as a mediation of the former, and by acquiring other credit-moneys as the driver of the entire process. By paying off debt, the commodity producer might be able to establish another commercial credit relation of production. The products purchased with the circulation of credit-money might be used as a means of exchange or as a means of mercantile labour, and part of the back-up reserves obtained might be used to buy or accept the offer of other credit-moneys. If some of the credit-moneys offered are the particular forms of the commodity producer's future liquidity, the commodity producer will use part of his or her immediate liquidity to assert the solvency of some other immediately illiquid commodity producer. The liquidity resulting from the trading of the commodity producer, both in general and of the genuine product of his or her mercantile labour, will pass as his or her underlying solvency, and failure to generate enough liquidity will indicate ex post insolvency. However, ex post solvency can mask underlying individual illiquidity. This would be the case if losses from commercial credit relations are offset by gains made through financial credit relations.

Now individual back-up reserves can mask individual insolvency and the circulation of credit-money can mask ex post individual illiquidity as immediate individual solvency. The commodity producer could use this as the means to come out of underlying insolvency without bearing the full brunt of it – actual insolvency. However, if he or she fails to do so, credit-money would protract individual insolvency through contingent access to other commodity producer's back-up reserves – i.e. through contingent access to liquidity. However, although with the circulation of credit-money immediate individual solvency is made the subjective mediation of individual liquidity, the latter is still the subjective mediation of ex post individual solvency. The underlying identity of liquidity with solvency will assert itself externally and forcefully sooner than later if it does not assert itself through the fulfilment of the expectations of commodity producers. This fulfilment is contingent first because the financial credit relation and the commercial credit relation make up a difference-in-unity, whereby the former is ultimately identical with the latter but is established before the social character of its commercial foundation has been asserted. Second, the credit relation of production and the exchange relation of production themselves make a difference-in-unity, whereby the former is ultimately identical with the latter but is established before the underlying exchange relation of production which it drives.

It is apparent from the above argument that credit-money is an array of particular credit-moneys determined by their face value and the timing of their maturity, and that money advances are the array of particular money advances – also determined by size and timing – driving the particular credit-moneys not considered worthless. Thus the emergence of a general rate of discount for a standard length of time is an objective outcome arising from the adjustment of the market rather than a subjective presupposition. For the general rate of discount to become a subjective presupposition – that is, for the money advance to become the general driver of the system of commodity production – the personal, private relations of production will have to be actively pooled, rather than their pooling being just the objective outcome of the circulation of existing credit-money. In other words, credit-money will have to be created and circulated prompted by the advance of money, rather than the other way around. This inversion, which entails the differentiation of capital into financial capital, cannot be accounted for either within the framework of the commodity or even that of the reproduction of capital. It presupposes the political relation of production or, equivalently, the subjectively conscious collective relation of production, and hence the concept of state, specifically, that of the modern state.

4. Debit-Money: Measure of Mercantile Value of a Money Advance

From the moment that the driver of the means of payment is securitised, and therefore commoditised as credit-money, the means of payment of a securitised debt differentiates itself as debit-money from the means of payment of the advance purchase which gave rise to the credit-money in question. As the effective quantity of money which the issuer of a credit-money gives to its holder on its date of redemption, debit-money is the effective measure of the mercantile value of this credit-money.

Both debit-money and the means of payment are ex post quantities of money. Whether debit-money will appear to pay off a particular credit-money or the collateral of this credit-money will be handed over to its holder depends on whether the issuer of this credit-money has been able to realise a measure of advanced mercantile use value at least as big as the nominal measure of the mercantile value of the credit-money due. If the issuer is unable to pay for his or her advance purchase in full and in time, then he or she will necessarily be unable to honour the credit-money which he or she issued as the nominal means of purchase. However, at this point the similarity between debit-money and the means of payment stop, and their differences jump to the fore. First, with the circulation of credit-money the issuer of a particular credit-money has the option to try to realise his or her expected measure of the mercantile use value of his or her advance purchase with the mediation of financial arbitraging, in addition to commercial arbitraging. Second, due to the fact that credit-money is a general personal promise, there is no room for grace period or for partial payment. Either credit-money is redeemed on time and at its face value or the collateral is relinquished to the holder of this particular credit-money. The option is whether to pay in full or not at all, and is no longer determined by whether the contingent measure of the advanced mercantile use value of the debtor's commodity is bigger than the nominal measure of its advanced mercantile value. Now it is determined by whether the measure of the mercantile use value of the collateral is bigger than the nominal measure of its mercantile value. The latter is the measure of the debt which this collateral is the security of – the face value of the credit-money due. The former measure would be smaller than the latter not only if the expected sale price of the collateral were lower than the face value of the particular credit-money it backs. It would also be lower if its expected sale price was higher but the contingent measure of its mercantile value was even bigger than the quantity of money its sale price would fetch. This could only happen if the issuer of credit-money had to resort to circulating credit-moneys in his or her hands to be able to pay and had to offer discounts too big for the holder. Once financial credit has differentiated itself from commercial credit, a situation like this would be the manifestation that the hedge of the issuer of the credit-money due is not big enough for him or her, which would render him or her financially insolvent or, equivalently, fundamentally illiquid.

If at the date of redemption of a particular credit-money, it is not in the hands of the original recipient, the debit-money used to redeem it differentiates itself from money in its function of means of payment formally, even if the credit-money is paid off. As discussed in section 3 above, the circulation of credit-money brings about a triangulation, so that on the date of payment the issuer of credit-money pays for his or her advance purchase from his or her supplier indirectly by directly paying off his or her credit-money to the issuer's current creditor. In other words, the issuer of this particular credit-money fulfils the terms of his or her temporary work-based partnership with his or her supplier – that is, the terms of his or her commercial credit relation of production – by fulfilling the terms of his or her temporary trade-based partnership with his or her current creditor – the financial credit relation of production. The terms of the financial credit relation of production between on the one hand the supplier and financier and on the other the new creditor and actual lender had been fulfilled through the discounting of the particular credit-money issued by the debtor. However, it is all three – the debtor, the financier and the creditor – who make up a temporary actual commodity producer, and it is only dissolved once the debtor pays off his or her credit-money. This means that the financier or middleperson, though already formally independent from and outside of this temporary actual commodity producer is actually part of it – without either command or indebtedness – until the dissolution of this producer. Money as the means of payment is the content of debit-money, which nonetheless plays a different function from the means of payment. The commercial credit relation of production is a sort of lingering phantom limb until the dissolution of the financial credit relation because if the debtor fails to pay off his or her debt, the debtor's supplier is likely to lose the debtor's custom.

Once a debt has been commoditised, there is the possibility that at some point the current holder of the credit-money in which it is embodied might offer it to its own issuer in payment for a holder's debt to the issuer, if the holder had any. There is also the possibility that its holder might offer it to its issuer as the means of purchase of a particular mercantile product which the issuer has for sale. The issuer could not be forced to take back the credit-money which he or she has issued before its date of redemption at its face value, or at all. Thus it would be up to the recipient of the offer to take it up or turn it down, just as if he or she had been offered somebody else's credit-money as currency. The issuer will take back his or her own credit-money before its due date if the measure of its mercantile use value is bigger than the measure of its mercantile value. The latter measure is the quantity of money which the debtor or the prospective buyer, as the case may be, wants for it. This will be the face value of the credit-money which the debtor wants to pay to the issuer with the issuer's own credit-money and the sale price of the mercantile product which the holder wants to buy from the issuer with the issuer's own credit-money respectively. The particular form of debit-money will be in one case the particular credit-money which the debtor wishes to pay off with the creditor's own credit-money, and in the other the particular product for sale which the prospective buyer wishes to buy from the issuer. The former measure, in turn, will be the quantity of money which the issuer's credit-money would have allowed the issuer to make since its issuance to that date if he or she accepted the offer received minus the contingent quantity of money which it would cost the issuer not to have the money form of his or her claim on his or her debtor in one case and the money form of his or her commodity in the second case. Thus the former measure would depend on the discount offered by the current holder of the issuer's credit-money for its issuer to take it back before its due date.

With the possibility to acquire back one's own credit-money before its date of redemption, debit-money differentiates itself from the means of payment not only in form but also in content, since a debtor could pay off his or her debt with a different amount of money than he or she had promised. In other words, the effective measure of the mercantile value of a particular money advance would deviate from its nominal measure not due to default but to its being paid back before its due date. If the issuer of credit-money accepts it as a means of payment, he or she will allow his or her debtor to pay off his or her debt with the issuer and therefore sterilise his or her own credit-money. By the same token, the issuer would sterilise his or her own credit-money before its due date, thereby dissolving the credit relation of production with its holder and cancelling any claim on him or her for the quantity of money stipulated in his or her own issuance. This is the foundation of the system of settlement of payments through debt clearing. Since it cancels off mutually offsetting liabilities, it consecrates as exchange relations of production the commercial credit relation that gave rise to either liability and all mediating financial credit relations which circulated these credit-moneys. In other words, the settlement of payments through the offsetting mutual debts is the equivalent of cash payments. If the issuer of credit-money accepts it as a means of purchase, the issuer will allow the buyer to purchase from him or her through the sterilisation of the issuer's own debt before its due date. This is the origin of the settlement of purchases through debt clearing and is the equivalent of sales for cash, since by sterilising his or her own credit-money, its issuer socially consecrates the commercial credit relation which gave rise to it and all financial credit relations which circulated it until its sterilisation.

The issuer of credit-money might also find out that the credit-money which he or she has issued is for sale at a discount. If the discount is good enough, it will make the measure of the mercantile use value of this credit-money to him or her since its issuance bigger than the quantity of money necessary to buy it, so the issuer would buy back his or her own credit money at its current price before its date of redemption. In so doing, the issuer would sterilise this credit-money and eliminate a claim on him or her for the quantity of money stipulated in the credit-money. In this case, debit-money would take the particular form of the quantity of the universal product – cash – used to buy back the credit-money. Thus debit-money is the cornerstone of inconvertible symbols of money or collective currency proper and of bank currency – that is, of credit accounts not backed by deposits. To return credit-money to its issuer either as currency or as an ordinary commodity before its due date is the very opposite to giving him or her somebody else's credit-money. Whereas the former option settles at least one debt, the latter rolls over debt. Unlike the former, the latter operation socially consecrates the mediating financial credit relation of a commercial credit relation but it does not consecrate its foundation or origin. Fulfilment of the original credit relation is simply pushed back in time by handing over another claim to money, rather than actual money. Whereas the circulation of existing credit-money in any of its three forms is the rollover of debt, debit-money as its necessary complement is the cancellation of debt and the consequent sterilisation of credit-money.

5. Conclusion

In this paper I have shown that money has three distinct credit functions – means of payment, credit-money and debit-money – and have attempted to provide a theory of their fundamental features and their relation to one another based on a reinterpretation of Marx's (1867; Part 1, Chapter 1, Section 3) theory of the mercantile form of value. I have shown that money in its function of means of payment is the driver of genuine savings or contingency funds, that credit-money arises when the internal driver of credit-money is commoditised, thereby collectivising genuine savings, and that credit-money gives rise to debit-money as the means to sterilising commoditised debt. As a result, I have made credit-money a fundamental function of money in its own right and a foundation of the explicit differentiation of capital, rather than a mere offshoot of capital, and put forward the concept of debit-money, which is only implicit in discussions on bank currency and the sterilisation of commoditised liabilities.

I have argued that the credit relation is a temporary private relation of production between two individual commodity producers, and that it is the driver of the exchange relation of production – or exchange for ready cash –, which is the only social form of the relation of production in commodity production. The commodity relation of production – or commodity exchange in usual parlance – has been shown to be the difference-in-unity of a credit relation of production and an exchange relation of production. It is a difference-in-unity because the credit relation of production is established ahead of the exchange relation of production, but since the latter relation is the foundation of the former relation and is a relation constituted in the exchange for cash itself, the unity of both relations is asserted externally and therefore forcefully. I have pointed out that the commoditisation of debt is the source of the differentiation of the financial aspect of a credit relation of production from its commercial facet, and that financial credit drives commercial credit but ultimately rests on the commercial foundation of credit relations of production. Financial credit is a temporary private trade-based relation between a financier and a lender as the means for the lender to establish a temporary private trade-based relation with the debtor. However, trade is only the driver of a commodity relation of production – the relational moment – and not the entire content of the commodity relation.

I have shown that the differentiation of the credit relation from the exchange relation is the origin of the differentiation of liquidity as the subjective mediation of solvency, but that dynamic – or underlying – solvency is the objective foundation of static – or immediate – liquidity. I have also argued that the differentiation of financial credit from commercial credit is the origin of the differentiation of formal static solvency from static liquidity as the subjective mediation of static liquidity, but that the latter is the subjective foundation of immediate solvency. Thus the dynamic individual quest for solvency can only be carried out as an immediate individual quest for an adequate, varying level of liquidity at each point in time. The fact that the credit relation of production rests on the exchange relation of production makes the monetary claim on a debtor, both commoditised and otherwise, commodity-money, that is, conditional future money. I have argued that this is the origin of a credit crisis. Since the circulation of credit-money is the means through which private back-up reserves are objectively pooled, I have argued that this circulation is the mechanism of contagion whereby a debt default leads to a payments crisis and from there to a full blown financial crisis. Finally, I have shown that credit-money is the conceptual origin of the convertible token of money and that debit-money is that of inconvertible collective symbols of currency and of bank currency. This explains away the seeming contradiction between money being a genuine product and collective currency being a mere credit for its holder.

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