Economic policy as expectations management: 
Keynes' and Friedman’s complementary approaches

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1. Introduction

Keynes and Friedman are usually depicted as opposed on almost everything regarding the functioning of a monetary economy. In particular, Friedman is considered as firmly confident in the self-adjusting capacity of the economic system whereas there is little doubt that Keynes was not. By the same token, Keynes and Friedman understand differently the causalities at work in the interactions between the monetary side and the real side of the economy. And Friedman is well known to have been a strong opponent to the Keynesian confidence in the ability of public authorities to improve the functioning of a market economy. Now, when compared to the New Classical approach, similarities and convergences arise between the two of them. Both Keynes and Friedman take into consideration disequilibria and departures from the intertemporal competitive equilibrium (as opposed to perfect market clearing). And both Keynes and Friedman consider economic policy as non-neutral (at least in the short term for Friedman). Regarding the fundamental issue of whether we may need to stabilise a decentralised market economy, Lucas (2004: 24) rightly points out that Keynes and Friedman share the “agreed-upon view” that “we should stabilize spending flows, and the question is really one of the details about how best to do it. Friedman’s approach involved slightly less government involvement than a Keynesian approach, but I say slightly”.

This paper aims to compare Keynes and Friedman along the lines of the stabilisation issue. The argument we would like to put forward in this paper is that, beyond their irreconcilable views mentioned above about the dynamics at work in a monetary economy and beyond the sharp differences in the confidence they respectively place in public authorities, there remain significant and strong convergences in Keynes’ and Friedman’s matters of concern. That is, at the analytical level, both of them are highly preoccupied by issues such as expectations and coordination. At the policy level, for both of them the role of the government should be to stabilise the economic system. And for both of them this basically means stabilisation of private expectations. But yet, this is not to deny hardly reconcilable views. As we will show below, it is on the issue of the temporal dimension of the problem addressed that they part company, the long term coordination for Keynes and the short term information failures for Friedman - as paradoxical as this might appear at first sight.

At the methodological level, an undertaking such as ours could appear as a high-risk study. The first reason for this is that a very long time-span elapsed between the young Keynes and the late Friedman, from the 1920s until the very recent period. Even worse, their respective ideas evolved over time. Keynes started with a concern for short-term monetary disturbances in his *Tract on Monetary Reform* (1923), which was highly

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2 See his interview given to Snowdon and Vane (1999).
3 The economy to which Keynes refers here is not merely a barter economy. As noticed by Hahn (1977:
esteemed by Friedman, whereas Friedman initially endorsed the Keynesian ‘gap closing’ approach to inflationary pressures and then moved progressively towards a position close to free banking. So if we are to compare these two great authors, what are exactly the relevant writings for such an inquiry? Second, the historical contexts they respectively faced were highly different. That is the reason why Keynes is usually viewed as the economist of the Great Depression whereas Friedman’s influence is commonly explained by the Great Inflation that developed countries experienced at his time. If it turns that their matters of concern were specific to their particular time and place, Keynes’ and Friedman’s respective analyses as well their policy advocacies would be hardly compared without misunderstandings. Third, Friedman was undoubtedly influenced (but negatively of course) by the Keynesian revolution, so that his theoretical apparatus was largely built as a reaction to Keynes of course but more importantly to the Keynesians. This is particularly true regarding Friedman’s work concerning the consumption function and the demand for money function that proved to be two key rationales for the existence of a stable and unique intertemporal equilibrium. This element of opposition and critique towards the adversary might give us a blurred image of the relevant comparison points between our two authors in place of a balanced comparison.

Our way of dealing with the first difficulty will be to leave aside the young Keynes as well as the young Friedman as much as possible and to concentrate accordingly on their achieved, or let us say mature, positions. And we will address in particular the issue of the avenues of reflections these two economists might have for us today at both the analytical and policy level despite that much time has passed since their original inquiries. Indeed, our purpose here is to not to investigate the evolution in Keynes’ and Friedman’s respective treatment of the stabilisation issue but instead to bring into light some convergences in Keynes’ and Friedman’s legacies. Regarding the second pitfall, we know well that Keynes and Friedman truly faced highly contrasted economic circumstances. But yet, Friedman was highly impressed by the Great Depression, he even acknowledged to have started studying economics because of the image this dramatic episode impressed on him.\(^2\) To a certain extent, Keynes’ and Friedman’s writings should be read from the standpoint of two economists who have in common to ensure that this kind of dramatic event does not happen again. Last, regarding Friedman in particular we will leave aside as much as possible the critical part of his writings and focus on his own analytical constructs and policy advices.

We will proceed as follows. The following section is dedicated to Keynes’ treatment of the failures at stake in a decentralised market-economy, with the long-term state expectations at the core of his matters of concern at both the analytical level and the policy level. In section 3, we will show that Friedman too considers that some failures might occur in a monetary economy, with paradoxically in his case an emphasis on short-term expectations. By way of conclusion, section 4 will outline some of the fruitful avenues of reflection Keynes and Friedman could provide for those who seek for a better understanding of the functioning of a monetary economy and who try to design accordingly better policy devices.

2. Keynes on the stabilisation of long-term expectations

\(^2\) See his interview given to Snowdon and Vane (1999).
The basic problem Keynes identifies in the functioning of a monetary economy is not merely forecasting errors or short-term mismatches. It is neither delay in the competitive adjustment-process because of nominal rigidities, to take one but very representative example of the diseases suffered by a monetary economy. In fact, the problem at stake for Keynes is more severe than that and much more difficult to handle. In his views, a monetary economy does not possess the adjustment mechanisms that are mandatory to reach back the intertemporal competitive equilibrium after a large external shock. Accordingly, it might well appear that a monetary economy is maintained at a stable less-than-full-employment equilibrium. At the core of this defect, one can identify the indeterminate character of the long-term expectations held by private actors. Public authorities hence play a critical role to falsify and to reverse the pessimism of private agents when needed, and to maintain a proper state of expectations regarding the possible future prospects of the economic system.

We will first identify the failures at stake in a monetary economy à la Keynes. We will then investigate the role played by public authorities to address the problem at source.

2.1. Keynes’ treatment of the long-term expectations and intertemporal coordination failures

The preparatory work of the General Theory, and especially the definition of a monetary economy (also called an “entrepreneur-economy” or a “money-wage economy”) to be found in the volume 29 of Keynes’ Collected Writings (hereafter CW), explains well the basic defect at the origin of market failures identified by Keynes. In this preparatory work, Keynes analysed the functioning of a monetary economy with regard to a “real” or a “neutral” economy.

A “real economy” is defined as a cooperative system in which people are paid ‘in kind’, namely “a community in which the factors of production are rewarded by dividing up in agreed proportions the actual output of their cooperative efforts” (Keynes [1933] CW 29: 77). As a matter of mere definition, there cannot be any disequilibrium in a cooperative system, a “real economy” in Keynes’ wording - even temporarily.3

Next, in a “neutral economy” as defined by Keynes there can be temporary disequilibrium but there is no room for persistent gluts. The factors of production are paid in money and not in kind but it is assumed that there exists a “mechanism of some kind” (Keynes [1933] CW 29: 78) that ensures that the product will be bought back by the factors of production as it would be the case in a real economy. The crucial mechanism that ensures this absence of a general glut crisis is nothing else than the classical theory of interest. The interest rate is viewed as the variable that coordinates savers’ and investors’ plans. An individual who abstains from consumption during the current period sends at the very same time the signal for a future consumption and investors react to this signal in preparing to this future consumption in purchasing capital-goods at the current period. Effective demand is then fixed. The determination of

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3 The economy to which Keynes refers here is not merely a barter economy. As noticed by Hahn (1977: 38), “the idea that there would be no unemployment in a barter economy is grotesque”. To put it differently, the use of money is not mandatory to obtain disequilibrium. In Hahn’s words: “It is therefore not money which is required to do away with a Say’s Law-like proposition that the supply of labour is the demand for goods produced by labour. Any non-reproducible asset will do. [...] Keynes was fully aware of this and that is why he devoted so much space to the theory of choice amongst the alternative stores of value” (Hahn 1977: 31).
the interest rate through competitive forces matches productivity and thrift and ensures accordingly the existence of an intertemporal equilibrium corresponding to full employment.

Last, in a monetary economy too the factors of production are paid in money but now the “mechanism of some kind” that ensures the feasibility of the intertemporal equilibrium is lacking. In a monetary economy, the factors of production can stock-pile the asset in which they are paid (they can hoard ‘money’ that pays nothing) instead of consuming now or purchasing a wealth-asset with the view to consume latter. A fall in current does not signal at the very same time the need for investment to prepare for future consumption. Entrepreneurs have now to make forecasts regarding the demand their product will face. That is, they have to form expectations regarding their markets outlets, the state of effective demand in the periods ahead, all magnitudes that determine the relative price system of a decentralised market-economy. As to wealth-owners and investors, the issue turns to expect not only the future value of the wealth-assets but also the structural characteristics of financial markets (the type of assets at their disposal, their relative price structure, and so on).

This is how expectations enter the scene in Keynes’ explanation for market failures. Regarding the formation of expectations, the first point to be emphasised is that in Keynes private actors do not merely form expectations on the basis of a fully known distribution of probability. To be precise: if they were possessing full knowledge on what might happen, they would hold their expectations firmly, with an absolute confidence. But because they evolve in a world of ‘uncertainty’ and not in a world of ‘risk’, as they do not know the whole structure of the ‘states of the world’, they also need to place a certain degree of confidence in the expectations they hold.

Second and consequently, the expectations at stake here do not simply apply to inflationary expectations; they are not merely nominal expectations. That is, agents do not only hold expectations regarding the value of nominal prices as well as their rate of change in the periods ahead within a distribution of probability known with certainty. When they develop expectations regarding the relative prices to come in the remote future, the problem individuals face is that these prices are the product of the structural characteristics of the economy and that, seen from today, the future distribution of probability underlying the structure of the economy is, at least partially, unknown. By the way, it should be noticed that people do not even know to which extent their knowledge is lacking. In our views, it can be argued that for Keynes uncertainty applies here to the structure of the economy in the periods ahead. And the following quotation,

4 Keynes insisted that the same type of troubles might arise in an economy in which the factors of production, and crucially wage-earners, would be paid in anything other than the product they contributed to elaborate: “Money is par excellence the means of remuneration in an entrepreneur economy which lends itself to fluctuations in effective demand. But if employers were to remunerate theirs workers in terms of plots of land or obsolete postage stamps, the same difficulties could arise. Perhaps anything in terms of which the factors of production contract to be remunerated, which is not and cannot be a part of current output and is capable of being used otherwise than to purchase current output, is, in a sense, money. If so, but not otherwise, the use of money is a necessary condition for fluctuations in effective demand.” (Keynes [1933] CW 29: 86)

5 As Keynes himself already stated this point in his Treatise on Probability: “Probability is not related to the balance between favorable and unfavorable evidence but to the balance between the absolute amount of relevant knowledge and of relevant ignorance. [...] An accession to new evidence increases the weight of an argument. New evidence will sometimes decrease the probability of an argument, but it will always increase its ‘weight’ ” (Keynes [1921] CW 8: 77).
in which Keynes famously made his point regarding uncertainty, should be read in this perspective of the long-term expectations:

‘By ‘uncertain’ knowledge, let me explain, I do not mean merely to distinguish what is known for certain from what is only probable. [...] The sense in which I am using the term [uncertainty] is that in which the prospect of a European war is uncertain, or the price of copper and the rate of interest twenty years hence, or the obsolescence of a new invention, or the position of private wealth owners in the social system in 1970. [...] We simply do not know.”

(Keynes [1937] CW 14: 113-14)

Because individuals do not only make forecasts within a distribution of probability known with certainty but also have to make forecasts regarding the distribution itself, one can speak of an uncertainty of second order (Dos Santos Ferreira 2000).

Third, the expectations at stake here should be viewed as objective – contrary to Knight’s (1921) or Savage’s (1954) subjective treatment of uncertainty – in the sense that the probability formed is independent of our own judgement. That is, the individuals who populate a monetary economy à la Keynes are not simply interested in the statement of a supposed personal judgement regarding the price structure to come – assuming such a behaviour possible. The problem faced by individuals here is not merely to conform their own judgement regarding an exogenous distribution of probability with the distribution of probability itself. For agents fully immersed in markets, endowed as they are with the task of making bets on the future, the problem at hand is not to get out of an individual uncertainty: in an uncertain world the forecasts regarding the possible future states of the world will have an effect on the decision context to come. So individuals are interested in the forecasts of the other market players’ judgment for it is this common judgement that will determine the relative price structure in the periods ahead. Hence the issue of market conventions that we will discuss below.

Last but not least, in general people do not change their mind very quickly about the distribution of probability they currently face and they do not rethink deeply their position regarding their relative ignorance very often: “the […] conventional method of calculation will be compatible with a considerable measure of continuity and stability in our affairs, so long as we can rely on the maintenance of the convention” (Keynes [1936] CW 7: 152). That is, private agents need time to revise both their expectations together with the confidence they place in these expectations. Because new evidence does not necessarily comes at our disposal very quickly and because time is needed to place confidence in this new evidence and to hold accordingly our expectations with more weight, individuals and by the way the community as a whole are very likely to be trapped in harmful conventions regarding the economic climate in the periods ahead, with no competitive mechanisms at disposal to reduce the resulting disequilibria. In other words, long-term expectations are not likely to be very elastic - to borrow Hicks’s (1946) terminology. A we will see below, pessimistic views about what the future might bring forth into the remote future might be difficult to reverse precisely because of their self-fulfilling nature.7

As a direct outcome of these principles applying to a monetary economy, market disequilibria occur either because of a too depressed long-term state of expectations (i.e.

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7 Reference to Mankiw and Reiss (2002) and Sims (2003)?
a too low marginal efficiency of capital) or because of a too low confidence placed in expectations (i.e. a too high liquidity-preference) – both deficiencies being likely to occur concurrently. To understand properly this point, one must keep in mind that Keynes has so little interest for maladjustments in short-term forecasts that he assumes perfect foresight in the short period (Dos Santos Ferreira 2000). Forecasting errors regarding sales expectations in the current period being left aside, the issue of surplus stockpiles or shortages being ignored accordingly, the attention focuses on the long-term issue of the coordination between saving and investment. To help the reader to properly grasp this issue, the *General Theory* offers two parables that illustrate well the twofold coordination problem faced by private agents in a monetary.

First, the parable of the deferred diner shows that a current curtailment in the demand for consumption-goods does not provide the signal for a corresponding increase in this demand for consumption-goods for a definite good and at a definite period ahead.⁸ As Leijonhufvud (1968) or Dos Santos Ferreira (2000, 2014) show, a decentralised market system is not able to reconcile the inter-temporal choices on the respective part of producers and consumers: “the actual information mechanism composed of existing markets lacks certain ‘circuits’” (Leijonhufvud 1968: 280). This absence of forward markets for a wide range of commodities precisely corresponds to the first heading of market failures as elaborated by Keynes, namely a too depressed state of long-term real expectations.

The second heading in Keynes’ construction of market failures, which deals with the actual functioning of financial markets, is illustrated by the famous parable of the beauty contest.⁹ Financial markets as they do work are not able to compensate the deficiencies of a monetary economy that come from the absence of forward markets. When the long-term state of expectations is too low (when the marginal efficiency of capital is too depressed) the interest rate as it is actually determined in financial markets is not able to reduce the imbalance in that it does not coordinate savers’ and investors’ plans. As shown by Leijonhufvud (1968), once the prospective income streams of a composite wealth-asset (which include bonds, equities and capital goods, the price of which is considered as given in the short run)¹⁰ ‘the’ interest rate plays the role of an inverse index of the price of this non-monetary assets aggregate. Newly produced capital goods have to compete with the existing stock of non-monetary asset. Similarly, money as a store of value has to compete with other non reproducible assets

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⁸ “An act of individual saving means – so to speak – a decision not to have dinner to-day. But it does not necessitate a decision to have dinner or to buy a pair of boots a week hence or a year hence or to consume any specified thing at any specified date. Thus it depresses the business of preparing to-day’s dinner without stimulating the business of making ready for some future act of consumption. It is not a substitution of future consumption-demand for present consumption-demand, – it is a net diminution of such demand.” (Keynes [1936] CW 7: 210)

⁹ “[...] professional investment may be likened to those newspaper competitions in which the competitors have to pick out the six prettiest faces from a hundred photographs, the prize being awarded to the competitor whose choice most nearly corresponds to the average preferences of the competitors as a whole; so that each competitor has to pick, not those faces which he himself finds prettiest, but those which he thinks likeliest to catch the fancy of the other competitors, all of whom are looking at the problem from the same point of view. It is a case of choosing those which, to the best of one’s judgement, are really the prettiest, nor even those which average opinion expects genuinely thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be. And there are some, I believe, who practice the fourth, fifth and higher degrees.” (Keynes [1936] CW 7: 156)

¹⁰ The price of this composite asset can roughly be assimilated to the marginal efficiency of capital, which is considered as given in all the first 18 Chapters of *The General Theory* except precisely in Chapter 12.
that might also provide a high liquidity premium. Now, to properly understand this point about liquidity, one must remind that a liquid asset is defined in Keynes as an asset, the value of which is weakly dependent on fluctuations in the long-term state of expectation (Hayes 2006, Rivot 2013a). That is: the less confident we are in our expectations, the higher the rate of return we shall require if we are to part with liquidity. Consequently, for a given state of long-term expectations the confidence placed in those expectations might be too low (the uncertainty regarding the distribution of probability actually faced might be too high) so that wealth-owners might require a too high rate of return if they are to part with liquidity. Noticeably, ‘money’ would easily lose its liquidity-premium in case of an erratic supply.

That is why in a monetary economy the interest rate is the price of liquidity (i.e. of ‘money’) and not merely the price of credit. In other words, the interest rate does not equilibrate the current flow of saving with the current flow of investment. Truly, Keynes defines the interest rate as “the reward for parting with liquidity for a specified period” (Keynes [1936] CW 7: 167). But in a world in which newly produced assets have to compete with the existing non-monetary asset (for investment goods are considered closer substitutes to bonds than consumption goods) the interest rate does not equilibrate the demand for loanable funds (i.e. investment) with the supply of these loanable funds (i.e. saving); With the assumption of a constant supply of money, a too high liquidity-premium conferred to monetary assets means that the current level of the interest rate, which is consequently a monetary magnitude (Smithin 2003), might be too high to allow saving and investment to equilibrate at their full employment level. Conversely, this means the current valuation of wealth-assets might be too depressed to ensure an intertemporal equilibrium corresponding to full employment.

The conventional determination of the interest rate, which is precisely the second heading of the market failures issue, ensues from this wealth-owners incapacity to hold their expectations with full confidence: “Thus, according to Keynes, the real rate of interest has a life of its own, based on our well-founded distrust of forecasts of the long-term future and on the security offered by money, as the store of value least affected by changes in such forecasts” (Hayes 2006: 154). So the matter at hand for Keynes is not merely that the competitive adjustment process takes time after an external shock, because of wage rigidities, delays in price adjustment, and so on. Rather, the problem is that there are no equilibrium market forces to rely on. Therefore, a monetary economy can be trapped for an indefinite period at a less-than-full-employment equilibrium position. To put it the other way round, disequilibrium might last indefinitely with no equilibrating mechanisms at work.

\[\text{\textsuperscript{11}}\] Conversely, the liquidity risk carried by assets which pay fixed prospective streams corresponds to “the possible (not probable or expected) loss of value as a result of a change in the state of expectation, which includes the state of confidence” (Hayes 2006: 21).

\[\text{\textsuperscript{12}}\] Put differently, “a monetary economy is not an ‘as if barter’ economy precisely because, when money can be held as a store of value, the rate of interest also acquires a crucial role in portfolio allocation decisions, which may undermine its capacity simultaneously to coordinate the allocation of resources over time” (Laidler 2010: 54).

\[\text{\textsuperscript{13}}\] As stated by Bibow (2000), Keynes’s assumption of exogenous money features a kind of exogeneity due to bank behaviour: “the exogeneity position represented in The General Theory runs counter to both verticalism and horizontalism” (Bibow, 2000, p. 533). As already stated in the Treatise on Money, banks have their own liquidity-preference schedule, so that they can easily run counter against both bullish or bearish private actors and against the central bank policy. An exogenous money supply means a cooperative behaviour on the part of banks, which allows at the analytical level to leave aside monetary disturbances and to focus the attention on the issue of the coordination of long-term expectations.
To sum up, the market failures trouble that prevails in a monetary economy à la Keynes is a twofold coordination problem connected to a long-term perspective. A monetary economy à la Keynes might be trapped in a less-than-full-employment equilibrium either because private agents (crucially wealth-owners and investors) expect a low level of effective demand or because they attribute a very low weight to these expectations. To put it in a nutshell, pessimistic expectations lead to a low marginal efficiency of capital while low confidence placed in expectations leads to a high liquidity-preference.

First, the absence of forward markets precludes a direct intertemporal coordination of private actors’ plans, especially regarding ultimate consumption and production. The marginal efficiency of capital comes under this heading and will be roughly addressed by fiscal policy. Regarding the second issue, namely liquidity-preference, a direct outcome of Keynes’ treatment of the uncertainty issue discussed above is that a high liquidity-preference means that private actors require a high rate of return to part with assets they consider (generally as a matter of convention) as being weakly dependent of a sudden (and unexpected from today’s perspective) change in the long-term state of expectations (Hayes 2006, Rivot 2013a). That is, the interest rate as it is actually determined is not able to ensure the indirect coordination of savers’ and investors’ plans. The liquidity-preference comes under this heading and will be roughly addressed by monetary policy.

2.2. How to cope with intertemporal coordination failures? Keynes’ socialisation of investment

As a matter of fact, Keynes’ views regarding economic policy and state duties in a monetary economy significantly evolved over time. His advocacies also depended on the country considered. Regarding fiscal policy, Keynes’ first pleas for public work in Great Britain predate the 1929 financial crash. More surprisingly, in the lectures he gave in the United States in 1931, he considered that monetary expansion would be sufficient to escape the recession in that country.14 To understand both points, one need to remind the contrasted economic climate in Great Britain and in the US at that time: Great-Britain experienced a more or less continuous recession during the 20s whereas the US were in comparison a dynamic and growing economy. If we apply the theoretical approach framed above, we would say that in the early 30s both Great Britain and the US held a long term state of expectations rather pessimistic, but the particularity of Great Britain was to hold this pessimism with a strong weight.

Truly, the Keynes of the early 30s is the proponent of public works to escape the Great Depression. He denied that for Great Britain monetary loosening would succeed in restoring aggregate demand at its full employment level. He also fought hard against the Treasury View according to which public spending would have no other effect than to crowd private spending out. If the attention is narrowly focused on the Great Depression (which ended around 1936-37), what is obtained is an insistence on fiscal policy at the

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14 See for example: “I think the argument for public works in this country is much weaker than it is in Great Britain. [...] Here you can function as though you were in a closed system, and [...] for such a system I would use as my first method operating on the long rate of interest. I think in this country deliberate public works should be regarded much more as a tonic to change of business conditions, but the means of getting back to a state of equilibrium should be concentrated on the rate of interest. That condition not being so in Great Britain, one had to lay great stress on public programs but in this country I should operate on the rate of interest.” (Keynes, summer 1931, Harris Foundation meeting, quoted in Moggridge and Howson 1974: 458–9)
expense of a disregard for monetary policy, together with a basic contempt for fiscal consolidation. But this is to provide a partial and even erroneous picture of Keynes’ policy schemes. If the attention is directed to Keynes’s policy advices after the *General Theory*, an image quite different can be seen. In the policy schemes Keynes built during the 40s (CW 27) with the purpose of building an economic programme for a peacetime economy, what comes through is a deep concern for long-term programmes, the critique of short-term devices that are likely to prove pro-cyclical and even the call for balanced ordinary budget (Rivot 2013b). To put it in a nutshell, after the Great Depression Keynes became highly concerned with the prevention of recession rather with plans for successful exit from crises, a problem with which he was occupied previously.\textsuperscript{15} So contrary to generally accepted ideas, the major lessons in economic policy Keynes drew from the theoretical apparatus he built in the *General Theory* are for the long run: the control of the long-term state of expectations together with the degree of confidence with which these expectations are held.

Accordingly, in Keynes’ political view both fiscal and monetary policies deal with the long-term expectations as well as the confidence placed in these expectations. A crucial point to be emphasised is that fiscal policy and monetary policy must be seen as highly complementary. For example, monetary loosening would hardly succeed in case of a restrictive fiscal programme. By the same token, a large capital-scheme package is very likely to be thwarted by an erratic monetary policy. This being said, fiscal policy can be considered as meeting primarily the coordination problem linked to the absence of forward market for a wide range of goods (i.e. the heading of the marginal efficiency of capital that the parable of the deferred dinner well illustrates) whereas monetary policy meets more easily the second coordination problem (i.e. the heading of the liquidity preference that the parable of the beauty contest illustrates).

Regarding first fiscal policy, the control of the marginal efficiency of capital should operate through the set-up of a “capital budget”, the latter being defined as “a compilation of and budgetary forecast of all capital expenditure under public control, including local authorities and public boards” (Keynes [1945] CW 27: 405). According to Keynes’ original scheme, about two-third or three quarters of the whole investment of the economy would be controlled directly or indirectly by state authorities (Keynes [1943] CW 27: 322), which seems quite comprehensive for a contemporary reader. Yet, this public control over capital-schemes does no necessarily entail public ownership but can be achieved through public-private partnerships. Keynes’ purpose is to prevent large-scale fluctuations in the demand for investment goods: “emphasis should be placed primarily on measures to maintain a steady level of employment and thus to prevent fluctuations” (Keynes [1943] CW 27:323). When the government launches an investment programme, it increases directly the demand price for newly produced capital goods, and through this way encourages private actors to revise their long-term state of expectations, i.e. to raise the marginal efficiency of capital. Here the point is that the demand price for long-lived capital assets would be easily directed at full employment since the very purpose of state interfering in the capital asset market is precisely to encourage private actors to revise their long-term expectations regarding

\textsuperscript{15} As Keynes wrote to Robbins in 1943, “much less effort is required to prevent the ball rolling than would be required to stop it rolling once it has started. [...] After the slump has fully developed, the relevant figures get dreadfully large” (Keynes [1943] CW 27: 316).
the state of effective demand, to help private actors to escape harmful conventions regarding the remote future (Carabelli and De Vecchi 2000).\footnote{See also Rivot (2011, 2013b).}

Monetary policy is the second weapon of this plan for the socialisation of investment, which is also conceptualised for the long term. Basically, the provision of monetary assets through an open-market programme is directed towards convincing private investors to revise their judgements on the future interest rates (i.e. to revise their judgements on the future price level of non-monetary assets once the marginal efficiency of capital is considered as given). By the way, this means convincing wealth-owners to part with liquidity at lower rates, that is to ask for a lower liquidity premium. As summed up by Keynes himself: “the major purpose of the Treasury should be to establish stable conditions with a gradually declining rate over a long period of years ahead, a necessary condition of which is the creation of a reasonable expectation that this is, in fact, the probable course of events” (Keynes [1935] CW 22: 351). The interest rate at stake is the long-term one since the expectations held by wealth-owners are for the long run and the uncertainty considered by Keynes applies to the structure of the economy in the remote future, i.e. to the states of the world private agents will face in the periods ahead. This concern Keynes developed for uncertainty also explains well why he insisted that each fall in interest rates should be considered as definitive by private actors, which means that so that sharp swings should be prohibited. For example, it might happen that “a consolidation of the existing position coupled with a greater degree of confidence in the maintaining of the existing rates of interest” (Keynes [1936] CW 22: 375) would be more needed than a further fall. Thus, the very purpose of monetary policy according to Keynes can be understood as follows: to part with liquidity at lower and lower long-term interest rates, that is to ask for a lower and lower liquidity premium, implies that individuals attribute higher and higher weight to their expectations of future prices of non-monetary assets. In short, monetary policy aims to convince private actors that the future is less unknown than they could have feared and that undertaking new capital schemes is henceforth worthwhile.

To sum up, Keynes dealt with the two-tier intertemporal coordination problem faced by a monetary economy (a low marginal efficiency of capital together with a high liquidity-preference) in a twofold way. First, the control of the price demand for newly-produced capital goods by aim of a capital budget (disentangled from the ordinary budget) is supposed to convince private actors to forecast full employment in the remote future and to develop accordingly optimistic expectations of the wealth-assets they hold. Second and complementarily, the control of the long-term interest rate by aim of monetary policy is supposed to convince private actors to hold these full employment expectations with a high weight. So both fiscal policy and monetary policy are much more comprehensive in Keynes’ original advocacies than in the claims that have being ascribed to him.

3. Friedman on the stabilisation of short-term expectations

Let us now turn our attention to Friedman’s own explanation of the disequilibria at work in a monetary economy. It is noticeable that Friedman’s views on the stabilisation issue significantly evolved over time. The young Friedman conceived an automatic stabilisation scheme in which public spendings would evolve counter-cyclically and
deficit budget would be monetised. Truly, much of Friedman’s theoretical efforts must be read through the lens of his fight against the Keynesian revolution. His theory of the consumption function\textsuperscript{17} together with his approach to the demand for money are two key elements put forward by Friedman in order to deny the Keynesian claim for coordination problems and unemployment. At the analytical level, with consumption decisions being based on forward-looking optimising behaviour on the one hand and with the holding of money being viewed as a temporary abode of purchasing power on the other hand, Friedman denies the Keynesian claim for persistent unemployment at both sides. At the empirical level Friedman undertakes investigations, which he pretends they sustain his theoretical researches. Now, Friedman would not deny the existence of some failures or of some market imperfections that impede the working of the competitive adjustment process after an external shock. His overall theoretical ambition can be seen as an attempt to understand the disequilibrium mechanisms that impede an automatic return to the intertemporal equilibrium after a shock, the latter being possibly an external shock or an internal but severe disturbance. But at the opposite of Keynes, what Friedman clearly and firmly denies is the possibility for a decentralised market economy to be trapped indefinitely at a less-than-full-employment equilibrium.

3.1. Friedman’s treatment of the short-term nominal expectations and information imperfections
For Friedman, there do exist competitive market forces that ultimately bring the system back to its equilibrium position after an external shock. Consequently, the market disequilibria he deals with are necessarily temporary. At it was the case for Keynes, Friedman’s ultimate explanation for disequilibria lies in the formation of expectations. But surprisingly enough, Friedman’s main concern was for the formation of expectations in the short and medium run while we have seen that it was the exact opposite for Keynes.

It is commonly considered that the rational expectations approach is nothing but a development of Friedman’s initial assault on the Phillips curve (1968), a refinement of his original idea of adaptive expectations. In our opinion, this is not really fair to Friedman’s original, and quite sophisticated, understanding of expectations.

Friedman himself explicitly took issue with the rational expectations approach in the last Chapter of Monetary Trend (1982) co-authored with Schwartz. Friedman used the example of the ‘free silver movement’ (in the late 1890, the question that rose was whether the United States would go off the gold standard) to show that investors made what can be considered as systematic forecast errors for about twenty years. This example is used by Friedman to show that the time period required to safely rely on the absence of correlated forecasting errors (that is, to safely rely on the ‘rational’ expectations assumption) is quite long with regard to the time horizon concretely faced both by individuals and by policy-makers. At a more abstract level, Friedman also objected to rational expectations that as economists we face historical time, which means that the ‘free silver movement’ episode is an experiment that cannot be repeated. So it can be hardly stated that investors were effectively wrong in their forecasts. Correlatively, Friedman (1982) argues that rational expectations conflate an assumed objective probability distribution of outcomes with the subjective probability held by

\textsuperscript{17}See Friedman’s Theory of The Consumption Function (1957).
individuals. That is, rational expectations wrongly assume that “participants in whatever market is considered have ‘correct’ estimates of the probability distribution of outcomes (itself something that is difficult or impossible to define objectively)” (Friedman and Schwartz 1982: 630). So for Friedman the fact is that, in the short run at least, individuals face ‘uncertainty’ rather than ‘risk’ as defined by Knight: they do not know with certainty the probability distribution they face.

Friedman’s critique of the rational expectations approach is consistent with his general Marshallian disentanglement between the short period and the long period (De Vroey 2009), in which his conception of expectations is rooted. Keeping in mind that in the short period it is rather uncertainty than risk that prevails, the following statements appear illuminating. The quotes from Friedman’s “Inflation and Unemployment” (1977) about Phillips curve run as follows:

[... we [...] developed an alternative hypothesis that distinguished between the short-run and the long-run effects of unanticipated changes in aggregate nominal demand. Start from some initial stable position and let there be, for example, an unanticipated acceleration of aggregate nominal demand. This will come to each producer as an unexpectedly favorable demand for his product. In an environment in which changes are always occurring in the relative demand for different goods, he will not know whether this change is special to him or pervasive. It will be rational for him to interpret it as at least partly special and to react to it, by seeking to produce more to sell at what he now perceives to be a higher than expected market price for future output.

[...] Both [workers] and their employers are likely to adjust more slowly their perception of prices in general – because it is more costly to acquire information about that – than their perception of the price of the particular good they produce.

(Friedman [1977] 1987: 352-53; emphasis added)

What the quotations above show is that individuals take time to evolve in a risky context, i.e. to gain critical knowledge about the probability distribution they face. They really need time to adapt to a new environment, for example to disentangle a change in relative prices from a scalar effect. Next, Friedman’s appraisal of “personal probability” indicates that he leans against a subjective conception of probability, in line with Savage and Knight but in opposition to Keynes. That is, in Keynes individuals are deeply immersed in market-processes when they form their expectation, for example when they try to make forecasts about the future valuation of wealth-asset (the latter being highly dependent of the judgement of the other market players). Keynes’ conception of probability is not subjective but objective to the extent that the problem is external to the individual: the matter in question is to forecast the other market players’ forecasts.18 In Friedman, the probability is rather subjective in that it applies to our own judgement. To use the common metaphor of an urn containing white and black balls (any ball being replaced in the urn after the random draw) Friedman’s point about short-term uncertainty can be reformulated as follows: people take time to get reliable knowledge about the proportion of white and black balls. Of course, they might use the beliefs of other players to form their final opinion and to get out of their context of uncertainty

18 Again, in Keynes, it is not only that individuals do not know the probability distribution they face. Even more critically, the probability distribution they will eventually face depends on what the future will bring forth, which is rather indeterminate from today’s perspective. Hence the self-fulfilling character of these long-term expectations.
(Friedman 1982). But the point is that the probability distribution is unique and that the result of the next random drawing is definitely independent of the judgement of those players. In Friedman, private agents have to get out of their own context of uncertainty through the acquirement of information regarding the relevant structure of the price system, which is set in an external fashion regarding their own judgment as well as the others' forecasts. People do not need to guess the other market-players' expectations as Keynes' beauty contest illustrates the formation of objective expectations in an uncertainty context.19

Once one shifts attention to the long run, the problem under consideration is much more simple than in Keynes because this individual context of uncertainty is eventually relieved. Individuals finally end up knowing the 'true' distribution of probability they face. As the previous quotation pursues about unanticipated changes in aggregate nominal demand: "But the situation is temporary: let the higher rate of growth of aggregate nominal demand and of prices continue and perceptions will adjust to reality" (Friedman [1977] 1987: 353; emphasis added). No doubt that in the long run the competitive and efficient intertemporal equilibrium prevails. In several theoretical essays, Friedman takes the extreme position of perfect foresight. On can see him holding the simplifying assumption that "at a long run equilibrium position, all anticipations are realized, so that actual and anticipated, or measured and permanent magnitudes, are equal" (Friedman 1970: 48; Friedman and Schwartz 1982: 59–60), an assumption much stronger than rational expectations indeed. Such an assumption is not excessive if long-term coordination is effective.

To sum up on Friedman's treatment of expectations, Friedman takes the opposite view to Keynes (who focuses on long-term real expectations) in considering that the major issue regarding expectations is for the short period and applies to nominal forecasts within a distribution of probability which is exogenously given to private agents. Consequently, the failures Friedman is concerned with apply to information failures, the unavoidable time required to escape individual uncertainty and to safely evolve in a risky environment.20

Leaning against Keynes' classification, it can be argued that, in the long run, a monetary economy à la Friedman corresponds to Keynes' 'neutral economy': the interest rate is the price of credit, which coordinates efficiently savers' and investors' plans. Accordingly, money is nothing but a temporary abode of purchasing power (Friedman 1970, Friedman and Schwartz 1982). This does not mean that Friedman would argue as the New Classical economists that a decentralised market-economy never faces disequilibrium.21 That is, some stabilisation device is needed for the

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19 Noticeably, all the metaphors given in Friedman's paper dedicated to speculation ("In Defense of Destabilizing Speculation" 1960) come under the heading of risk instead of Keynes' heading of uncertainty: heads or tails, the roulette wheel like in Monte Carlo or lottery tickets. In all the cases mentioned by Friedman, the full distribution as well as the likelihood of occurrence is fully known. It is not possible for the markets under consideration not to provide the right signals to private actors.

20 Friedman's positive appraisals of Keynes are so rare that they deserve attention. About expectations, Friedman argued: "The only probability notion I can make sense of is personal probability in the spirit of Savage and others. Keynes's degree of belief is in the same family. In fact I believe that Keynes's contribution in his Probability book has been underrated and overlooked." (Friedman's interview in Snowdon and Vane 1999: 132) Unfortunately, Friedman did not identify the gap that remained between his own treatment of uncertainty and Keynes'.

21 Hoover (1984) rightly framed his dividing line between Monetarism mark I and Monetarism mark II along this distinction between the New Classical rational expectations approach and Friedman's adaptive expectations.
economic system does not adjust instantaneously. At the very same time, Friedman strongly opposes the Keynesian case for counter-cyclical public intervention targeted to compensate these disequilibria.

As we can see, Friedman's position is quite subtle. At the core of his analyses one can find the issue of the formation of nominal expectations as well as nominal rigidities. A decentralised market-economy is always submitted to dynamic processes: “there is a continuous stream of unanticipated changes” (Friedman [1977] 1987: 352). The first very cause of market disequilibria identified by Friedman is precisely these nominal rigidities. It is because of nominal rigidities that monetary shocks have real effects. Here, Leijonhufvud's ‘swedish flag’ is helpful to state properly this point about nominal shocks and nominal rigidities. In Friedman’s corner of the flag:

The typical disturbance is an exogenous change in the fiat money supply; the failure of the money wage to adjust immediately propagates the shock to real magnitudes so that real income and unemployment (and not only nominal prices) co-vary with the money stock. Note carefully that this stickiness of money wages is essential to this theory. Without it, the history of the US money stock is not to be transformed into a history of US business fluctuations.

(Leijonhufvud 2000: 34)

Noticeably, these nominal rigidities are in Friedman's eyes nothing but a “catch-all excuse for all failures to provide a satisfactory explanation of observed phenomena” (Friedman 1962a: 213) that justify discretionary devices accordingly. That is, the existence of nominal rigidities and the ensuing delays in the adjustment process might be the result of institutional arrangements and collective choices (for example regarding the determination of the natural rate of unemployment). And the reasons for disequilibria might be found elsewhere.

The second very cause of market disequilibria identified by Friedman is well known and it comes precisely from the detrimental effects of those activist policies targeted to compensate nominal rigidities on market participants’ expectations, which eventually slow down the adjustment process. Regarding the government’s temptation to bargain inflation for unemployment by aim of an activist monetary policy, Friedman famously argued that “only surprises matter” (Friedman [1977] 1987: 352). As soon as inflationary expectations adapt to the new policy regime the trade-off vanishes (Friedman [1977] 1987: 352). In the meantime, activist monetary policy gives rise to market disequilibria due to errors in relative price forecasts of market participants (whatever producers or workers).

The third and critical cause long-lasting equilibrating process is connected with the formation of expectations, i.e. with the idea of individual uncertainty faced by private actors in the short period. Unanticipated changes give rise to “lags” or to “overshooting”

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22 See for example: “There is a tendency to take it for granted that a high level of recorded unemployment is evidence of inefficient use of resources, and conversely. This view is seriously in error. A low level of unemployment may be a sign of a forced-draft economy that is using its resources inefficiently and is inducing workers to sacrifice leisure for goods that they value less highly than the leisure under the mistaken belief that their real wages will be higher than they prove to be. Or a low natural rate of unemployment may reflect institutional arrangements that inhibit change. A highly static rigid economy may have a fixed place for everyone whereas a dynamic, highly progressive economy, which offers everchanging opportunities and fosters flexibility, may have a high natural rate of unemployment” (Friedman 1977: 355).
(Friedman [1977] 1987: 352) in the competitive adjustment process. While one easily grasps how “lags” in expectations (what is commonly meant by ‘adaptive’ expectations) can bring to temporary disequilibria on goods and labour markets, the idea of overshooting is less well known. And yet, this phenomenon of ‘overshooting’ is in our view the background of Friedman’s overall policy advocacies. Indeed, Friedman’s three purely theoretical essays, namely the essay dedicated to the “Optimum Quantity of Money” (1969), the “Theoretical Framework for Monetary Analysis” (1970) as well as the Monetary Trends (1982), conclude with the idea of an ‘overshooting’ during the adjustment process. Friedman considers an increase in the money supply but this idea might apply easily to any kind of external shock imposed on a monetary economy.23 Friedman’s reasoning is this: at the very beginning of the process after a monetary loosening, individuals are not necessarily able to disentangle a transitory rise in the money growth rate from a permanent one. The real interest being constant, the perceived cost of holding money is not fully adjusted and the current balances exceed their long-term desired level. That is, the nominal interest rate does not rise as much as in the case where inflationary expectations are revised without delay. Once the rise in the money supply is perceived as permanent, expectations are revised, which leads to a higher nominal interest rate. Hence, in the case of adaptive expectations there must be an overreaction during the adjustment process, an overshooting, in the rate of change in nominal income. There is no reason for the process to be smooth, so that cyclical patterns are possible.

A decentralised economy is very likely to respond to external shocks in a cyclical fashion, of course because of some nominal rigidities and delays (which are nothing else than Keynesian ‘excuses’ for interventionism) but much more crucially because of lags in nominal expectations. This idea of overshooting and cyclical patterns is in the eyes of Friedman the “key element in monetary theories of cyclical fluctuations” (Friedman 1969: 13). Adaptive expectations being taken seriously, market disequilibria and cyclical adjustment patterns are ultimately explained by delays in the acquisition of information by private agents, the lags in their formation of expectations due to partial ignorance in the short period. But it can still be safely considered that in the long run, a monetary economy possesses the competitive market forces that bring it back to its intertemporal equilibrium level after an external shock. The theoretician can thus safely assume perfect foresight in the long run as a working hypothesis. The task of state authorities turns to solve these information failures, which however do not persist in the long run, in the most appropriate way in a competitive market economy.

3.2. How to cope with information failures: Friedman’s anti-cyclical device
Regarding Friedman, it is usually the anti-discretionary tide of his advocacies that is reminded, his long-standing opposition to discretionary intervention regarding both fiscal and monetary policy. But this does not make of Friedman a staunch defender of laissez-faire. Regarding fiscal policy first, Friedman had not always been the radical opponent to fiscal policy he became in the 1960s. The early Friedman was quite wary of the tide for fine-tuning at stake in the post-World War II optimism but he was not distrustful of stabilisation fiscal devices. From the 1940s to the 1960s, Friedman moved from an opposition to fiscal discretionary policy towards a wholesale rejection of fiscal policy per se. According to the budget principle Friedman held in paper “A Monetary and

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23 Noticeably, this idea of a cyclical reaction pattern applies to the changes in the rate of inflation in the 1969 piece of work whereas it later applies to the rate of change in nominal income when Friedman renounces disentangling changes in real income from changes in the price level.
Fiscal Framework for Economic Stability” (1948), State taxes and spendings would vary counter-cyclically and would automatically contribute to dampening the business cycle through the offsetting of aggregate demand fluctuations. Stabilisation would also rise from the monetisation of deficits and demonetisation of surpluses. A critical point to emphasise is the indirect effect of such a scheme on private state of expectations in “stimulating a psychological climate favorable to stability” (Friedman [1948] 1953: 148). But Friedman eventually considers from 1967 onwards that fiscal policy is simply neutral, without any effect on real output or even inflation but only on interest rates. This is the position he will stick to. Regarding monetary policy too, Friedman’s evolved over time. Friedman moved from his famous ‘k per cent’ rule towards a less well-known system very close to free banking. In all of Friedman’s policy advices it is considered that monetary policy cannot but have only temporary effects on the market rates both of interest and of unemployment. The economic system is eventually brought back to its ‘natural’ position once the inflationary expectations have adapted to the policy shock. To put it plainly, while fiscal policy is purely and simply transparent with regard to the real magnitudes, discretionary monetary policy produces expansionary effects only through the short-period maladjustment of nominal expectations it produces.

Since at the time of the apex in the monetarist revolution Friedman came to share the ‘Treasury View’ position for a pure crowding out effect, let us ignore fiscal policy (despite the stabilising effect considered in the late 40s) and concentrate accordingly on monetary policy. The monetary rule Friedman advocated is usually seen as a default choice for a decentralised economy that is submitted to random shocks but that nevertheless needs an institutionalised monetary setting. Indeed, despite the fact that the holding of money entails welfare loss (because money enters both in the utility function and in the production function, Friedman 1969), Friedman considers that a barter economy is not worth discussing at the concrete level. That is, a constant rate of growth in the money supply is the best stabilisation policy achievable in a world in which “we do not know enough to be able to recognize minor disturbances when they occur or to be able to predict either what their effects will be with any precision or what monetary policy is required to offset their effects” (Friedman [1968] 1969: 107).

In our view, it is possible to go further this commonly accepted interpretation of Friedman’s call for a constant rate in the money supply growth. His k per cent rule is not only a second-best policy device for an economy in which the use of money as a means of exchange is unavoidable. If it is reminded that for Friedman a monetary economy does not adjust instantaneously to an external shock for the simple reason that people take time to disentangle a change in relative prices from a scalar effect in the general level of prices and to adjust their inflationary expectations accordingly, there is room for a substantive rationale behind the k per cent rule. That is, because temporary departures from the steady state of the economy are very likely to occur and that, in addition, “there is a continuous stream of unanticipated changes” (Friedman [1977] 1987: 352), there might be a hint in Friedman’s policy advices for the means to cope with the information failures faced by private actors in the short period. Indeed, Friedman insists that the main point regarding his monetary rule is not the aggregate targeted (should it be the monetary base, the means of exchange defined narrowly, or M2) nor the precise rate of growth decided: “the precise rate of growth, like the precise monetary total, is less important than the adoption of some stated and known rate” (Friedman [1968] 1969: 109; emphasis added).
Knowing that the quantitative theory of money applies well in the long run, the direct and stable link between the rise in money supply and the rate of inflation is perfectly internalised by private actors. Consequently, with a highly predictable rate of growth in the money supply, it becomes much easier to disentangle a change in the aggregate level of prices (well defined in advanced thanks to the constant rate of money supply growth) from a change in some relative price (which is necessarily the result of the free play of markets in an economy in which the state abstains from interfering). This is precisely for Friedman how state authorities can enhance the stabilisation properties of a decentralised economy and cope with its short-term information failures. A highly predictable rate of growth in the money supply erases much of the uncertainty faced by private actors in the short run (which increases their information set) and help them to hold much more firmly their expectations (which raises the adjustment speed of adaptive expectations). Ultimately, such an institutional device brings the economy closer to the rational expectations ideal of an instantaneous adjustment to external shocks.

Is this interpretation of Friedman’s monetary policy schemes for short-term expectations stabilisation called into question once one considers his later pleas close to free banking? In the early 1980s, because of deregulation and disintermediation on financial markets, monetary authorities loosed control over monetary aggregates (if they ever tried to get this control in Friedman’s eyes). So great instability in the velocity of money could be observed in the US, at least with respect to the monetary base and M1. Friedman then states that “it is preferable to state the rule in terms of a magnitude but that unquestionably can be controlled with very narrow limits within very brief time periods, [...] namely the monetary base” (Friedman [1984] 1987: 414). Viewed as something like “a Schelling point – a natural point at which people tend to agree” he then advocates “zero growth in high-powered money” (Friedman [1984] 1987: 422). There is a counterpart to the freezing of the monetary base, which is to let deregulation in the financial sector follow its natural course. Thanks to this twofold plea (the freezing of narrow money, together with the complete deregulation of the financial side of the economy), people would know exactly what is money and what is not. As Friedman had already elaborated in his “Monetary and Fiscal Framework for Economic Stability” (1948), “the idea is to establish a, supposedly, water-tight separation between money and credit, with a view of making the monetary core of the system ‘100 percent safe’” (Bibow 2002:8).

With a real output level growing at a stable rate, the behaviour of the nominal income and of the price level would depend on possible changes in the money multiplier: if financial innovations rise at the same pace as the real output (but without any necessary causality between the two), the money multiplier would rise too and prices would be kept stable; if not, prices will fall at the same rate that real output rises. As usual, what interests Friedman most of all is the dynamic temporary adjustment process. For him, history teaches us that the “loosening of the financial structure through continued deregulation” (Friedman [1984] 1987, p. 422) is very likely to increase the money multiplier (i.e. the ratio between monetary base and M2) as well as the income velocity of M1. Within the institutional setting advocated, both the changes in the money multiplier and in the income velocity would change gradually, which amounts to the exact contrary of the so-called instability in financial markets that would prevent the implementation of his monetary rule. At the same time the capacity for any initiative on the part of monetary authorities would be negligible, and the long-run
relationship between monetary income and M2 would be restored.

So Friedman’s shift towards monetary schemes close to free banking are an adaptation of his previous advocacies to the circumstances of the early 80s (due to the financial liberalisation of this era). And this adaptation is consistent with Friedman’s overall matter of concern for the stabilisation of expectations. Indeed, with the freezing of the monetary base, we would have a medium- and long-run stable money multiplier together with a stable relationship between real output and money supply which corresponds to the Quantitative Theory of Money. As it was the case for the k per cent rule, this modified institutional setting for the freezing of the monetary base would allow private agents to get out of their individual uncertainty and to adapt more quickly their short-term expectations. Ultimately, such a device would bring the economy closer to the rational expectations ideal of an instantaneous adjustment to external shocks.

4. Conclusion

Viewed from the perspective of expectations, the study above has shown that Keynes and Friedman have much in common. But this outcome requires going beyond many of their hardly reconcilable views regarding the functioning of a monetary economy as well as the opposite confidence they place in public authorities. Compared to the modern rational expectations approach where individuals possess the same knowledge as the modeller about the structure of the economy and where disequilibria are mainly explained by nominal rigidities, both Keynes and Friedman would put the stress on the formation of expectations to explain departures from the competitive intertemporal equilibrium.

Regarding Keynes, we have seen how deeply concerned the Keynes of the General Theory and after is with market failures. This concern is underpinned by his understanding of uncertainty, and in particular the long-term expectations regarding the prospective returns on capital goods. This lead him to hold a two-tier conception of long-term coordination and market failures: first, the absence of forward markets for a wide range of goods; second the inability of the interest rate to coordinate savers’ and investors’ plans. This requires a kind of public intervention much more comprehensive than countercyclical policies which would only substitute from time to time for a deficient level of private expenditures when it occurs. Unfortunately, with regard to this huge task conferred to the state it seems to have been almost completely forgotten how deeply concerned Keynes was with what have been later labelled ‘government failures’, namely the possibility for public authorities to worsen the diseases faced by a monetary economy out of equilibrium. There are several insights for this. There is first his concern for information, for example “the need for current and up-to-date information about net investment in the private sector” (Keynes [1945] CW 27: 409). On this issue, one can mention of course the vital need for the government as well the central bank to get knowledge on the economic climate, data on the prices, stocks levels, credit request, and so on and so forth.24 Undoubtedly, ill-timed measures would ensue from this lack of knowledge. The second point about government failures applies to Keynes’ concern for

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24 But on the other way, there is also the need for dissemination of knowledge about the economic structure to private actors. See for example the following quotation: “It must be the avowed and deliberate business of the Government to make itself responsible for the wholesale collection and dissemination of industrial knowledge. The first condition of successful control and usual interference of whatever kind from above is that it must be done with knowledge.” (Keynes [1927] CW 19: 643).
devices that would not instigate strategic behaviour from the part of private agents or for policies that would destabilise the free play of markets. Regarding this critical issue, one can mention the need for anti-inflationary schemes that would not thwarted by indexed contracts as in How to Pay for the War? (1940), or the need to enforce devices aiming at the control of commodity prices (i.e. buffer stock plans) that would not exacerbate speculation.25 Last but not least, his concern for government failures also appears in his entrenched opposition to deflationary fiscal policy that do nothing but worsen market expectations regarding effective demand in the near future.26

So Keynes is clearly aware that public authorities need to act wisely if they pretend to improve the functioning of a decentralised market-economy. In Keynes, state authorities are supposed to set a path, to create future prospects for private actors. Here is probably to be found the most critical lesson Keynes would have for us today: the duty he confers to the state for the fight against harmful conventions as well the provision of reliable knowledge regarding the state of the economy in the remote future.

Friedman too is fully engaged with the issue of expectations, regarding the understanding of the expectations formation in a monetary economy at the theoretical level together with the imperative need to control these expectations at the policy level. The first significant difference between our two economists is that Friedman takes a stance opposite to Keynes regarding long-term coordination. For Friedman, no doubt that the economic system converges to the competitive intertemporal equilibrium. This adjusting process is not necessarily a smooth and monotonic one, but yet the system converges. Accordingly, the emphasis is led in Friedman on the issue of the formation of expectations in the short period, the delay needed by individuals to adapt their the expectations regarding the ongoing prices of the goods and factors of production each agent needs to buy and sell in a monetary economy after an external shock, and to hold firmly their short-run nominal expectations. Unfortunately, Friedman’s deep concern for the rigidities in the formation of expectations and his sophisticated analysis of information failures seem to have been underrated. The second big difference between Keynes and Friedman is that Friedman does not share at all Keynes’ confidence in public authorities:

Speaking for myself, I do not believe that I have more faith in the equilibrating tendencies of market forces than most Keynesians, but I have far less faith than most economists, whether Keynesians or monetarists, in the ability of government to offset market failure without making matters worse.

(Friedman’s interview in Snowdon and Vane 1999: 138)

Friedman is precisely the economist who initially expressed the greatest opposition to erratic policies that change their priorities completely within very short time intervals, devices that are very likely to prove pro-cyclical and to enhance the uncertainty faced by private actors. But Friedman’s appraisal of government failures goes deeper than that. There is in Friedman a serious concern for the uncertainty faced by policy-makers, an uncertainty similar to the one faced by private actors. And this

25 On this, see Keynes’ several buffer stock schemes in volume 21 of his collected writings.
26 Let see for example the following quotation: “Unfortunately the more pessimistic the Chancellor’s policy, the more likely it is that pessimistic anticipations will be realised and vice versa. Whatever the Chancellor dreams, will come true! We must begin by resuscitating the national income and the national output” (Keynes [1933] CW 21: 184).
uncertainty faced by state authorities applies to the structure of the economy (what can be called his 'model-uncertainty' argument) as well as to the current economic climate (what can be called his 'data-uncertainty' argument).²⁷ Last but not least, because he eventually leaned against the idea of adaptive expectations, the avoidance of policy surprises and announcement of policy changes are not enough for Friedman and his concern for the stabilisation of expectations imply a specific type of policy devices. Gradualism (opposed to cold-turkey) is for him a true necessity.

References


²⁷ “We simply do not know enough to be able to use deliberate changes in taxation or expenditures as a sensitive stabilizing mechanism. In the process of trying to do so, we almost surely make matters worse” (Friedman 1962b: 78).


Abstract
This paper investigates the way Keynes and Friedman respectively address the issue of the disequilibria at stake in a monetary economy through a shared concern for the formation of expectations. It shows that Keynes was interested in the coordination of long-term expectations regarding non-monetary assets prospective yields while Friedman focused on the adaptation of short-term nominal expectations. Regarding the remedies to these disequilibria, both economists called for devices that aim to stabilise market expectations. As a direct outcome of the failures identified, intertemporal coordination failures for Keynes and information failures for Friedman, Keynes designed policies that aim to stabilise the long-term state of expectations while Friedman basically aimed at the acceleration of the competitive adjustment process.

Keywords
Coordination, expectations, stabilisation, economic policy, uncertainty.