

A Service of



Leibniz-Informationszentrum Wirtschaft Leibniz Information Centre for Economics

Tiliută, Bogdan Andrei; Diaconu, Ioana Raluca

Article Coronavirus: The moment for helicopter money?

CES Working Papers

Provided in Cooperation with: Centre for European Studies, Alexandru Ioan Cuza University

Suggested Citation: Tiliută, Bogdan Andrei; Diaconu, Ioana Raluca (2020) : Coronavirus: The moment for helicopter money?, CES Working Papers, ISSN 2067-7693, Alexandru Ioan Cuza University of Iasi, Centre for European Studies, Iasi, Vol. 12, Iss. 4, pp. 244-256

This Version is available at: https://hdl.handle.net/10419/286637

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.



WWW.ECONSTOR.EU

https://creativecommons.org/licenses/by/4.0/

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.





Coronavirus - The Moment for Helicopter Money?

Bogdan Andrei TILIUȚĂ*, Ioana Raluca DIACONU**

Abstract

The coronavirus crisis has unquestionably been a challenge globally and felt like an economic and psychological shock caused by the high number of illnesses and deaths caused by the virus. The drastic measures of physical distance and isolation have led to major economic effects. In this regard, our paper is trying to answer to the question if the unconventional methods would be effective in saving the economy burdened by the pandemic crisis and especially if "launching money from the helicopter" strategy is viable for the economy. We presented a series of government measures taken by countries affected and the analysis of the literature of the concept of "helicopter money". At the same time, the article reveals the exposure of the economic consequences resulting from the application of this unconventional solution, meant to restart afflicted economies.

Keywords: helicopter money, COVID-19, financial impact, pandemics, central bank

Introduction

Probably facing the worst economic crisis in modern history, the author of the best-selling book "The Black Swan: The Impact of the Highly Improbable" (Taleb, 2007) points out that the coronavirus pandemic cannot be considered a black swan. (an unlikely and unexpected event), but rather a white one, because of the possibility of being prevented. From his point of view, the metaphor "black swan" can be associated with the terrorist attack of September 11, 2001, but this epidemic could be anticipated and does not fit the pattern. It could rather be a "gray rhino" (Wucker, 2016), a threat with an increased probability that comes directly at you, with high potential impact, with very probable consequences, but which has been neglected. In this regard, governments, authorities, and organizations should knew to pay attention to signals and to anticipate the event. "Behind every Black Swan is a crash of Gray Rhinos" (Wucker, 2016, p. 243).

The massive spread of the SARS-CoV-2 virus is a major challenge for the entire health system, and all reports present a grim situation, with significant life losses. Governments' desperate attempt

^{**}Ioana Raluca DIACONU is assistant professor at Alexandru Ioan Cuza University of Iași, Faculty of Economics and Business Administration Iași, Romania, e-mail: ioana.raluca.diaconu@gmail.com.



^{*} Bogdan Andrei TILIUȚĂ is PhD student at Alexandru Ioan Cuza University of Iași, Faculty of Economics and Business Administration Iași, Romania, e-mail: tiliuta.bogdan@yahoo.com.

to stop/slow the spread of the virus has led to travel restrictions, the closure of restaurants, cinemas, theatres, the suspension of sporting events, and even a ban on leaving one's home. These measures have directly affected the economies of countries facing this virus by declining production and sales in many sectors where activity has partially or completely collapsed, especially during a state of emergency due to supply disruptions or declining demand due to the change of consumption patterns.

It all came to a standstill for months, and in just half a year the coronavirus pandemic wiped out several decades of global growth, from areas such as health, education, tourism to economic activities. According to Oxfam International (a confederation of 20 independent charities focused on reducing global poverty), it is estimated that by the time the pandemic will end, more than half the world's population (currently estimated at 7.8 billion people) would live in poverty.

It is known that consumption is the backbone of the economy, and to avoid the shock of a deadlock both nationally and globally it is necessary to throw a "lifeline" for the entire system, e.g. subsidizing consumption until it reaches the levels considered normal. It is important to note that once you allow the system to malfunction, the years and costs for it to recover will be much higher than the rescue system itself. The European Union and its Member States appear outdated and unable to act immediately and decisively to limit future devastating consequences, appearing to be like a hospital under siege by an unknown virus.

If no one expected and anticipated this pandemic situation, no additional prevention measures were taken and the classical procyclical measures weren't enough to face the economic and financial freezing generated by the virus. In this situation the intervention should be based on ongoing measures to limit and to manage the damages correctly. Classical theories are contested by modernists who came with nonconventional measures to defuse the situation like `launching money from the helicopter`.

The phrase "helicopter money" seems more like a metaphor than a proposal for a monetary policy instrument. However, the idea of throwing money out of the sky is a topical issue in economic debates and is understood by some economists and the media as a real alternative to the policy of "quantitative easing" applied by the world's major central banks in recent years.

Anyway, intervention techniques should be fast and decisive, each Member State should draw up a national economic recovery plan, adapted to its particularities to allow the restoration of the European architecture, already shaken by the exit of Great Britain from the European Union. A prompt, substantial and coordinated response is needed to offset this crisis. The issue that the paper what to clarify is if this unconventional method would be effective in saving the economy burdened by the pandemic crisis and especially if the concept of "helicopter money" is viable for any economies.

1. Helicopter money and the way to manage the crisis

There is a need for a prompt and well-targeted response from the political environment that is proportionate to the extent of the damage caused by this pandemic in order to minimize its effects. One option would be for governments to intervene and provide funds to affected companies/enterprises to support their activity, paying debts, or employees, without leaving this burden exclusively on them or governments could also reduce tax costs. This support would then take the form of a non-repayable loan and the problem would be transferred to governments that would have two alternatives: either increase taxes and fees - thus increasing the burden on households and firms or they would need capital market loans, which will lead to increasing public debt.

The concept of "helicopter money" does not refer to new banknotes dropped accidentally from an aircraft, but is a measure taken by governments to directly help people when the economy is blocked. Economists consider it a radical, even unconventional solution that central banks can use to save weak economies.

The Nobel Laureate in Economics (Friedman, 1969), in The Optimum Quantity of Money, shows how people would react if they experienced a unique event that will never happen again:

Let us suppose now that one day a helicopter flies over this community and drops an additional \$1,000 in bills from the sky, which is, of course, hastily collected by members of the community. Let us suppose further that everyone is convinced that this is a unique event which will never be repeated. (...) People's attempts to spend more than they receive will be frustrated, but in the process these attempts will bid up the nominal value of goods and services. Hence, the finale equilibrium will be a nominal income [that has doubled] ... with precisely the same flow of real goods and services as before. (Friedman, 1969, pp. 4-6)

There is no standard definition, but throwing "money out of a helicopter" has been associated with the idea that central banks can start printing money, and through the government, they determine the population to stimulate consumption, e.g. there is an injection of liquidity directly into the economy without the intervention of commercial banks. Calvo (1991) showed that it is one of the most efficient methods that would lead to economic recovery because this money that reaches governments is final, involves an irreversible operation, but the liquidity thus created will remain permanent and open the Pandora's box concerning the independence of central banks and the fiscal policy. Therefore, there is no guarantee that this measure of "helicopter money" would always have the desired effect, that "it would cure the disease without killing the patient." (Croitoru, 2016)

Renowned American professor and economist Nouriel Roubini (2019), who predicted the financial crisis from 2007-2009 since 2005, supports the idea of governments launching packages with substantial financial incentives, including "helicopter money" to avoid a scenario similar to the Great Depression of 1929 - 1933.

Although the aim is to stimulate disadvantaged sectors and restarting the economy, most economists believe that the tsunami of money would cause devastating, out-of-control inflation and high government debt.

The German economist Weidmann (2016) warned that this measure would lead to a loss of credibility of central banks, that would damage their balance sheets, and ultimately governments and taxpayers would have to bear the costs. Also, the policy would fail if the citizens did not spend the money received as the money would become a 'poisoned gift'.

Another consequence, in addition to the loss of credibility of the issuing entity, would be the internal and external devaluation of the national currency, the reduction of the net asset value of the central bank, hence the need to recapitalize it by the state in whose name it acts. The devaluation of the currency harms price stability and even the stability of the whole financial system.

The Governor of the Central Bank of Ireland, Gabriel Makhlouf, recently pointed out that offering free money to citizens is not a good option to fight the pandemic, but should be given to the financial support of certain categories of citizens and only certain sectors or companies. A similar message was sent by the Swiss government, which said it would not adopt any comprehensive financial stimulus program and would not support "throwing money out of the helicopter" (Halpin, 2020).

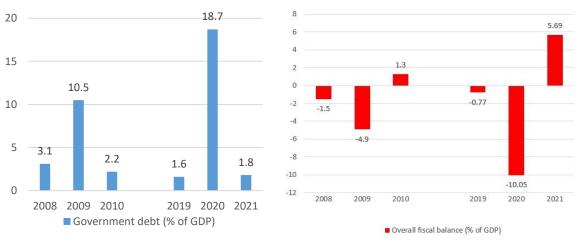
Even "fallen from the helicopter" money spreads unevenly in the economy, depending on when citizens use it. The losses of individuals who use or obtain money later are the source of additional income for those who take possession of the money earlier and buy goods and services with them before prices have risen (Cerna, 2020).

Although he highlighted the major problems that the economy may face if this method is used, Galí (2020) stated that when other options are not effective or do not produce the desired effect,

policymakers can turn to such practices: "Unfortunately, that emergency is currently upon us, provoked by the coronavirus. If ever, the time for helicopter money is now."

The spread of the coronavirus pandemic is expected to lead to significant losses in economic and financial activities. Following a recent forecast by the International Monetary Fund (2020) at the EU level, the consequences of this pandemic are expected to far exceed the magnitude of the crisis from 2008 to 2010. Consequently, in Figure 1 we presented the public debt and budget deficit in parallel during the years of the previously mentioned crisis and an estimate based on data provided by the MFI. In the case of the 2008 crisis, public debt more than tripled from 3.1% to 10.3 percentage points, while in the case of the coronary crisis, public debt is expected to exceed 18.5 percentage points given that before the crisis the rate was only 1.6%.

Figure 1. Change in Global Government Debt and Overall Fiscal Balance (percent of GDP) in E.U.



Source: IMF staff estimate (IMF) apud (Fedeli, 2020)

Regarding the evolution of the budget deficit in the 2008-2009 period, it deepened more than three times from 1.5% to 4.9%. In the next period, a double budget deficit is expected compared to the one reached in the recession period of 2008, expecting a value of over 10%. These values are indicative, and the impact of the coronavirus crisis can only be determined after finding a cure for CoVid-19 or a vaccine and eventually putting the pandemic to an end. WHO Deputy Director Ranieri Guerra warns that the number of coronavirus infections will increase - a second wave, between September and October 2020 (Di Donato, 2020).

The economic implications will be extensive and uncertain, with different effects on supply chains, production, the labour market, financial markets and the world economy as a whole. The negative effects can vary depending on the duration and the measures that governments will take: social distancing, border shutdown, stress caused by job losses that will lead to a high degree of uncertainty and insecurity.

The sudden slowdown of economic activity and the explosive increase in public debt as a result of high state spending related to the current SARS-CoV-2 pandemic have brought back the idea of offering a certain amount of money to all citizens for free. The aim is to increase the demand for goods and services and stimulate economic activities.

As early as 2002, the then EDF governor, Ben Bernanke, also known as "Helicopter Ben", said that this would benefit the economy in times of tension by stimulating consumption. (Bernanke 2002)

In the current situation, the US Congress has already approved a plan to save the US economy by offering a check worth \$ 1200 to each person who earns less than \$ 75000 annually. The check would have President Trump's name printed on it, and given the November election campaign, this measure appears to be a "money helicopter". Analysts believe that major liquidity injections may have a devastating effect, and the FED will lose control of the money supply, consequently leading to hyperinflation.

Another financial incentive to help the "hard-hit" population was implemented in Hong Kong, where every permanent resident over the age of 18 will receive 10000 Hong Kong (HK) dollars, the equivalent of 1284 US dollars. The aim is to support businesses, protect jobs, stimulate the economy, and reduce the burden on citizens. Here, too, a series of measures were taken to stimulate business (low-interest loans guaranteed 100% by the government, waiving company registration fees, extending subsidies to utility bills, money to support tourism, etc.), but also in citizen support (reduction of income taxes, payment of monthly rent for those with low incomes, etc.). In a similar approach, Singapore, which was hit by both coronavirus and Dengue fever would only give the population between \$ 100 and \$ 300.

The Government of Madrid has approved the introduction of a guaranteed minimum income of \notin 460 per month for the poorest citizens, whose financial stability has been exacerbated by the SARS-CoV-2 pandemic, and in this category would fall approximately 2.3 million people. According to the Instituto Nacional de Estadística (INE), Spain's economy, the eurozone's fourth-largest economy, fell 18.5% this year, a record low, cancelling out economic growth over the past six years and the abruptest decline since the publication of data in 1970. The United Kingdom stated that it was considering a similar measure.

The very high cost of the coronavirus pandemic drastically changes Japan's seven-year experiment to save the Japanese economy from a time bomb (\$ 1.35 trillion, one of the largest in the

industrialized nations), while suspicion of a recession is causing more and more people to demand "helicopter money", in other words, the central bank will incur unlimited expenses.

2. Helicopter money - is it a viable policy in times of recession?

The phrase "helicopter money" seems more like a metaphor than a proposal for a monetary policy instrument. However, the idea of throwing money out of the sky is a topical issue in economic debates and is understood by some economists and the media as a real alternative to the policy of "quantitative easing" applied by the world's major central banks in recent years.

Studies conducted by van Rooij and de Haan (2019) in the Netherlands and by Mencinger (2017) in countries with advanced economies such as Germany, France, Italy, and Spain show that over 40% of potential beneficiaries of programs such as "helicopter money" would save the cash received at the expense of investments or expenses. These studies show that these revenues are spent by 31% of Dutch beneficiaries and by about 5% of beneficiaries in countries with advanced economies. The same study also highlights the fact that the percentages change radically if this "helicopter money" programs are implemented constantly (monthly). In this case, the majority of beneficiaries (over 49%) would spend the money, followed by the beneficiaries who would keep it (20%), those who would use it to pay debts 12.6% and 9.1% who would invest it. Moreover, the study shows that 36% of beneficiaries who know the purpose of the money distributed would opt for saving it (van Rooij and de Haan, 2019).

Di Giorgio and Traficanteb (2018) study the impact of money released from the helicopter on domestic production and inflation, demonstrating that this type of action leads to rising inflation and thus the current account deficit.

On the other hand, Jarrow and Lamichhane (2020) point out that through the monetary policy promoted by the National Bank of Japan and the implementation of yield curve control measures (YCC) as a monetary policy tool, "helicopter money" would be beneficial to the economy. They conclude that in order to be viable, monetary policy must be linked to fiscal policy.

Given the above, we can conclude that an action to launch the "helicopter money" would not be useful if it were done by directly distributing funds to citizens. In this sense, in order to accomplish the main purpose of the "helicopter money", the issue of providing liquidity to the market arises, but without involving the end-users in the way of their distribution.

So we can point out the first condition that must be met for the effect of the money in the helicopter to be the expected one: it must have a non-monetary form and ensure a benefit other than the pecuniary exchange rate. In this way, the risk of higher inflation as a result of "injections" of liquidity into the market can be reduced.

This unconventional monetary policy is applied in times of recession, and it is important to use the non-monetary form of allocating resources to the market so that there is no risk of using them for purposes other than those established. Moreover, it is necessary for the "helicopter money" to have the capacity to be used both in an environment where liquidity is very low and to have a definitive, non-refundable character, so the value is preserved over time.

Thus, we can deduce the second condition, namely the non-refundable financial/fiscal incentive to be an asset for the beneficiary, without any obligation to the issuer.

The last condition for the effect of money in the helicopter to be the expected one is that when applying this measure, the price of money must be positive.

The analysis of the timing, manner and the scope of the measure to launch the "helicopter money" must be well justified and documented, as it overlaps with the function of public finance to regulate the economy based on the Keynesian doctrine. However, one can use a mixed method of classical monetary policies (increasing public spending, lowering taxes and duties, etc.) and unconventional ("helicopter money"), a conclusion derived from Buiter's study (2003). This can reduce the side effects that many economists blame (loss of confidence in the system, destabilization of markets, etc.). Moreover, these methods can turn risks into opportunities (the risk of a recession turns into opportunities to revive the economy and even strengthen the spheres of the market in which cash flow is ensured).



Figure 2. The evolution of monetary policy interest rate in Romania (%)

Source: own processing after data provided by National Bank of Romania

Although monetary policy aims at price stability, central banks through the interest rate adjustment mechanism can correct some trends of macroeconomic indicators (inflation, GDP, etc.). Considering the current conditions in Romania regarding the monetary policy interest rate presented in Figure 2, we can observe that, if at the beginning of the pandemic period it was at the level of 2.50% (value established in May 2018 as a result of its increase from 2.25%), it gradually decreased by one percentage point to the historical minimum of 1.50% (March 2020 - 2.00%; June 2020 - 1.75%; August 2020 - 1.50%). Low-interest rates generally stimulate investment and consumption, while higher interest rates stimulate savings, limiting consumption and investment in the short term.

Analysing the evolution of inflation in Romania we can see that it is in the multi-year stationary target (to meet the Maastricht criteria), so lowering monetary policy interest was not necessary from this point of view. However, once national emergency and the shutdown of important economic sectors were declared, impulses to restart the national economy were needed, which are largely based on consumption. Moreover, the study conducted by Cocriş and Nucu (2013) highlights that the application of an easing of monetary policy interest generates effects in the economy such as the expansion of the industrial production index, the medium and long term increase of the consumer price index (CPI) as a result of the increase in market demand, the boosting of lending, as well as the depreciation of the national currency.

Contextually, the ECB's monetary policy interest rate remained at 0% given the major discrepancies between the Union's economies (e.g. Germany vs. Greece, France vs. Italy, etc.). Di Giorgio and Traficanteb (2018) highlight in their study that the financial incentive is considerably more expansive, both on production and inflation, in monetary financing than in the case of debt financing. Thus, the situation of the European Union can be assimilated with the situation presented by Friedman (1969) in order to launch the "helicopter money". However, the size of the "package" and the shock wave it causes in the economy must be taken into account.

A non-cash model that could easily be implemented as "helicopter money" is holiday vouchers. These appeared in Romania in 2015 in the form of vouchers granted to public sector employees for their recovery and relaxation in order to cover domestic holiday expenses. Their main objective is to increase the amounts spent on domestic tourism, and the associated one to increase the number of tourists and the number of authorized tourist units by reducing the underground economy. They were also thought to have an important social impact determined by the increase in the number of jobs created, as a result of generating growth in various sectors: food production and trade, public catering services, leisure services, transport, etc. Other positive effects of using holiday vouchers are:

• increase labor productivity and employee motivation, physical and intellectual energy recovery;

- improve family relationships and balancing work and personal life;
- maintain the purchasing power of employees, obtaining additional income for employees to pay for tourist stays.

An analysis conducted by Economica.net (2019) shows that only in the summer of 2019 were made 269% more payments with holiday vouchers than in the previous year. Moreover, the study conducted by Pavel (2019) shows that the state recovers about 27% of the money only from direct benefits (income 3.5%; taxation of amounts associated with salaries - 3.45%; taxation of other expenses - 7.5%; taxation of investments generated in tourism - 12.53%). Thus, out of 500 million euros allocated to holiday vouchers, the state recovers from direct benefits of about 135 million. This would be a model to support the HoReCa (Hotels, Restaurants and Café) sector in Romania which has been severely affected by the coronavirus crisis.

Another non-monetary model was implemented this time in the United States, namely in Tenino, Washington. Local authorities issued wooden plaques totalling \$ 10000 and a declared face value of \$ 25 to support community residents severely affected by the coronavirus pandemic. These plaques circulate in parallel with the money inside the community, but can also be redeemed at the town hall. With these plaques, goods and services can be bought, but also local taxes can be paid, the purpose being to support the community (people who are at a standstill), though local small businesses can use them as well.

Another way to launch money from the helicopter is to create a cryptocurrency (digital currency) with local use and only for certain areas of the economy (tourism, HoReCa, medical services, public services, food, fixed assets, etc.). In this case, restrictions may be created regarding the use of cryptocurrencies, several types of cryptocurrencies specific to economic spheres may be generated that have an exchange rate determined by the needs and magnitude of the impact of COVID on that market.

Winners and losers in Coronavirus times - Conclusions

Although there is an acute need for governments of countries affected by the coronavirus pandemic to support people in difficulty and local businesses, we draw attention to the fact that before starting the money printing machine, the risks to which the country's economy is exposed have to be considered, them being high inflation and an unlimited increase in government debt.

During the pandemic, people will tend to be more rational, calculate their financial resources more carefully and save money, which would mean that this money thrown from the helicopter will not immediately reach the market to support the economy.

Once the effects of the pandemic pass, people will start spending, but if production does not rise as quickly, goods and services will no longer be available. To cope with rising costs, people will push for higher pensions and salaries, at which point there is a tendency to re-use helicopter money, although Friedman spoke of a single such intervention, as governments may find that funding can be obtained very easy.

The question that remains is, however, whether or not the measure would be life-saving. Efficiency is questionable given that citizens would choose to save the amount of money they receive and not to stimulate consumption. But the biggest dilemma is whether the concept is economically sound. Beyond the risk of rampant inflation, the loss of central bank credibility, the amounts of money left available will be higher for the rich than for the poor, which would artificially increase inequality.

Although some developed countries promote the idea of a "free lunch" for which no one pays, neither now nor in the future, in reality, the costs will be much higher than we would expect. Accepting free lunch can only be less expensive than not taking action and repairing the entire collapsing system.

Adopting the "helicopter money" policy would lead to the need to reanalyze the entire economic theory based on the Keynesian doctrine in which money "must come to their feet" by going where they find competitiveness and economic rationality. This would eventually open up new horizons for the concepts commonly used in the market economy, including tools to ensure maximizing utility, taking into account the budgetary constraints.

References

- Bernanke, Ben S. (2002), Deflation making sure "it" doesn't happen here, *Bank for International* Settlements Review, 68, pp. 1-8.
- Buiter, W. H. (2003), Helicopter Money: Irredeemable Fiat Money and the Liquidity Trap, National Bureau of Economic Research, pp. 1-67.
- Calvo, G. (1991), The Perils of Sterilization, *Staff Papers*, 38(4), pp. 921-926, International Monetary Fund.

- Cerna, S. (2020), *Elicopterul cu bani: un mijloc miraculos de relansare a economiei?*, April 28 (retrieved from https://www.contributors.ro/elicopterul-cu-bani-un-mijloc-miraculos-de-relansare-a-economiei/).
- Cocriș, V. and Nucu, A. E. (2013), Canalul ratei dobânzii în România: evaluarea eficacității transmisiei impulsurilor de politică monetară asupra inflației și creșterii economice, *Economie teoretică și aplicată*, XX(2), pp. 20-35.
- Croitoru, D. L. (2016), *Încotro se îndreaptă politicile monetare în economiile dezvoltate?*, May 18 (retrieved from http://luciancroitoru.ro/2016/05/18/incotro-se-indreapta-politicile-monetare-in-economiile-dezvoltate/).
- Di Donato, V. (2020), *Millions more could die in a possible 2nd coronavirus wave, WHO official warns*, CNN June 26 coronavirus news, 26 June 2020.
- Di Giorgio, G. and Traficanteb, G. (2018), Fiscal shocks and helicopter money in open economy. *Economic Modelling*, pp. 1-11.
- Economica.net. (2019), Tichete de vacanță: 192.000 de nopți plătite cu vouchere în vara lui 2019. Prețul mediu plătit de turiști - 923 lei (analiză), 06 August (retrieved from https://www.economica.net/tichete-de-vacanta-192-000-de-nopti-platite-cu-vouchere-in-varalui-2019-pretul-mediu-platit-de-turisti-923-lei-analiza_172295.html).
- Fedeli, F. (2020), Green signs, value and grandmother's cupboard, *Robeco. The Investment Engineers*, pp. 1-13.
- Friedman, M. (1969), The Optimum Quantity of Money, in Friedman, M. (ed.), *The Optimum Quantity of Money and Other Essays*, Chicago: Adline Publishing.
- Galí, J. (2020), Helicopter money: The time is now. *Mitigating the COVID Economic Crisis: Act Fast and Do Whatever*, pp. 57-61.
- Halpin, P. (2020), ECB's Makhlouf says 'helicopter money' not the answer to coronavirus crisis, *Reuters*, 7 Apr 2020, ed. Online.
- Jarrow, R. and Lamichhane, S. (2020), The Effects of Yield Control Monetary Policy: A Helicopter Money Drop to Financial Institutions, *Quarterly Journal of Finance*, pp. 1-38.

Mencinger, J. (2017), Universal Basic Income and Helicopter Money. Basic Income Studies, pp. 1-8.

- Pavel, I. A. (2019). "STUDIU: ce impact are masura de acordare a voucherelor de vacanta?", 14 February (retrieved from https://contabilul.manager.ro/a/23867/studiu-ce-impact-are-masurade-acordare-a-voucherelor-de-vacanta.html).
- Roubini, N. (2019), When recession comes, expect central banks to rewrite the rules, *The Guardian*, 29 Oct 2019, Ed. International edition.

Taleb, N. N. (2007), The Black Swan. New York: Random House.

- van Rooij, M. and de Haan, J. (2019). Would helicopter money be spent? New evidence for the Netherlands. *Applied Economics*, pp. 1-19.
- Weidmann, J. (2016), 'Helicopter money' is not manna from heaven. (retrieved from https://www.reuters.com/article/us-ecb-weidmann-idUSKCN0WL05N).
- Wucker, M. (2016), *The gray rhino: How to recognize and act on the obvious dangers we ignore.* MacMillan.