

Slater, Matthew, Bendell, Jem ORCID: <https://orcid.org/0000-0003-0765-4413> and Cave, Dorian ORCID: <https://orcid.org/0000-0001-5620-7535> (2019) Local Future Tax Credits: Towards a tool for local government to finance itself and help adapt to the climate emergency. Institute for Leadership and Sustainability (IFLAS) Occasional Papers Volume 4. University of Cumbria, Ambleside, UK. (Unpublished)

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Local Future Tax Credits: Towards a tool for local government to finance itself and help adapt to the climate emergency.

IFLAS Occasional Paper 4

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Nov 7th 2019

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To discuss this paper, consider joining the Government and Policy discussion group of the Professions' Network of the Deep Adaptation Forum, available via www.deepadaptation.info

Abstract

Local governments across the world have been declaring climate emergencies. Part of their response needs to be in attempting to adapt to the disruptions ahead. In an era of financial austerity leading to large cuts in local government budgets, new initiatives to empower them and their communities will be important. By incentivising citizens to pay taxes in advance, Local Future Tax Credits (LFTCs) may provide one way for Local Governments (LGs) to quickly increase cash flow without raising taxes, selling assets, speculating on property, or increasing commercial borrowing. As this paper is released in the hope of receiving constructive feedback, authors have pointed out several areas that would benefit from further research.

Introduction

Over 1000 local governments (LGs) around the world have declared a climate emergency, including hundreds in the United Kingdom (UK). The question now is what they are able to do about it, with both policies and budget commitments. The past decade of budget and staff cuts to Local Governments has left many in a difficult position to consider bold action. Ideally, new policies from central government would support LGs to implement their climate declarations, which have arisen due to the concerns of engaged citizens. However, in the absence of such support, LGs could consider new ways to raise funds, as well as to prepare for future economic disruptions arising from the impacts of climate change. It is with this predicament in mind that we have developed a concept for a financial innovation for LGs.

The first section of this Occasional Paper details the financial predicament that Local Governments in UK and Europe currently find themselves in, due to budget cuts and constraints imposed by national policies. We mention some of the financial innovations that are storing up future problems for LGs, as well as the limited experience of LGs in either creating or supporting local currencies. In most cases such initiatives have not reached scale or lasted over time.

The subsequent sections detail a proposal for a local currency innovation that LGs could develop, either themselves or in partnership with community groups. We call these “Local Future Tax Credits (LFTCs).” Not only do they offer a quick means of addressing financial constraints in LGs maintaining their key functions, if they are designed fully independently of the existing monetary and banking system, they offer a means of resilience of payments systems in the face of any future economic or societal breakdown or collapse. If you are interested to read the proposal, rather than the background on the financial situation of LGs, you can skip to the section titled “Local Future Tax Credits (LFTCs).”

Inasmuch as they provide an alternative means of payment independent from central government or central bank authorities, we argue that LFTCs could contribute to a re-localisation of control over economic and financial flows. We believe this to be a key policy aim in light of increasing disruption to economies and societies in the coming years due to climate change. As such, the proposal in this paper is one small contribution to the agenda now known as “deep adaptation.”

This Occasional Paper is not intended as a final proposal, but as an invitation for feedback on the concept. Focusing on local governments, local currencies, and LFTCs in this paper is not intended to suggest that these are the only or main ways that societies could seek to prepare for disruptive levels of climate change. Rather, we recognize that all kinds of efforts and responses are important to discuss, trial and scale up in the face of the climate emergency.

Financial stress of local governments

Austerity policies adopted by national governments have created a systemic problem with local government financing across the European Union (EU). In the UK, the Commons Select Committee pulled no punches when it said council services are 'at breaking point' and the social care system was "on the verge of collapse".¹

Because of the 2008 financial crisis and subsequent bailouts to banks, national governments have been allocating fewer and fewer funds to Local Governments (LGs). Since 2009, many countries have seen transfers from Central Governments to LGs cut or frozen,² which has particularly affected weaker municipalities³. For example, between 2010 and 2015, there was a 37% cut in real terms in Central Government funding to LG in the UK⁴; similarly, in France, the main Central Government transfers were slashed by 20% from 2013 to 2016.⁵ In Belgium, municipalities are to see Central Government transfers diminish by €884 million between 2016 and 2021⁶, and Italian municipalities received €9 billion less as transfers from 2010 to 2016.⁷

While LG income has been falling, most European countries have also required LGs to participate in national fiscal consolidation efforts, notably by strengthening budget deficit targets and/or expenditure limits. For instance, the Slovak Republic planned to reduce its LG expenditure by a cumulative 16.77% between 2010 and 2014, and Greece, by a cumulative 17.1% from 2012 to 2015.⁸

Despite this, LGs have been expected to finance the same level of basic social

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- 1 Parliament.uk (2019), "Local services will continue to decline until Government tackles £5 billion funding gap". Available at: www.parliament.uk/business/committees/committees-a-z/commons-select/housing-communities-and-local-government-committee/news/local-govt-finance-report-published-17-19
 - 2 Vammalle, C., & Hulbert, C. (2013). "Sub-national finances and fiscal consolidation: Walking on thin ice." *OECD Regional Development Working Papers*, OECD, 2013/02
 - 3 Ladner, A. (2017). "Autonomy and Austerity: Re-Investing in Local Government", in Schwab, C., Bouckaert, G. and Kuhlmann, S. (eds.), *The Future of Local Government in Europe: Lessons from Research and Practice in 31 Countries*, Baden-Baden: Nomos Verlagsgesellschaft mbH & Co. KG, pp.23-52. Available at: www.nomos-elibrary.de/10.5771/9783845280639/the-future-of-local-government-in-europe
 - 4 The Guardian, (2017), "Bankruptcy risk as 'desperate' councils play the property market" (29 April). Available at: www.theguardian.com/society/2017/apr/29/vince-cable-cash-strapped-councils-at-risk-credit-bubble
 - 5 Cour des Comptes (2017), "Les finances publiques locales 2017", *Rapport de la Cour des Comptes*. Available at: www.ccomptes.fr/fr/publications/les-finances-publiques-locales-2017
 - 6 De Romanet, V. (2017) "Le carcan budgétaire au niveau communal", *Comité pour l'abolition des dettes illégitimes*, (26 September). Available at: www.cadtm.org/Le-carcan-budgetaire-au-niveau
 - 7 Filoni, C. (2017) "Les communes italiennes écrasées par la dette et l'austérité : un audit citoyen de la dette, maintenant !", *Comité pour l'abolition des dettes illégitimes*, (6 December). Available at: www.cadtm.org/Les-communes-italiennes-ecrasees
 - 8 Vammalle, C. & Hulbert, C. (2013). Ibid.

services, often taking on additional burdens re-allocated from central governments. LGs have assumed greater responsibilities both in economic growth and redistribution, and therefore often having to cover greater social expenses.⁹

Meanwhile, the LG revenue base has either remained unchanged or, in most places, declined.^{10 11} Despite this situation, LGs play a considerable role in stimulating domestic demand through investment¹²: LG share of total investment within the EU grew from 7.0% in 2006–2007 to 8.3% in 2014–2015.¹³

There have been increasing constraints too on fiscal and financial policies, such as in Greece, Hungary and Italy where LG borrowing has been limited. This is part of a general reduction in LG autonomy¹⁴, as we detail below.

Strong and financially self-reliant LGs have been proven to serve as a bulwark against crises, provide stabilizing effects in times of economic pressure, and be generally more resilient to fiscal issues. Schwab and colleagues note that the countries with the least autonomous municipalities (such as Greece, Cyprus, or Ireland) were in general the most affected by post 2008 austerity.¹⁵ Therefore, a widespread undermining of the power and autonomy of LGs would seem to be a risky strategy in the long run.

As weather becomes increasingly extreme due to climate change, awareness is growing amongst the public and policy makers of the need to treat the situation as an emergency. As of November 2018, over a thousand LGs or regional governments have declared climate emergencies, including hundreds of councils across the UK.¹⁶ Some LGs officials that we have spoken to are aware of greater uncertainty ahead in terms of social and political upheavals, and the need for greater investments in food security, energy security, and flood defenses, amongst other practical means of adapting to climate change. In addition to this mainstream adaptation agenda, there is a broader 'Deep Adaptation' agenda

9 Donald, B., Glasmeier, A., Gray, M. & Lobao, L. (2014), "Austerity in the city: economic crisis and urban service decline?", *Cambridge Journal of Regions, Economy and Society*, vol. 7, 3–15

10 Vammalle, C. & Hulbert, C. (2013). Ibid.

11 Schwab, C., Bouckaert, G. and Kuhlmann, S. (2017), "Conclusion: Lessons and Advice for Future Local Government in Europe" in Schwab, C., Bouckaert, G. and Kuhlmann, S. (eds.), *The Future of Local Government in Europe*. Ibid. p.101-111

12 Kluza, K. (2014), "Impact of the economic slowdown on local government investments, debt and productivity in the EU countries", *Journal of Economics and Management*, vol.18

13 Kluza, K. (2017), "Risk assessment of the local government sector based on the ratio analysis and the DEA method. Evidence from Poland", *Eurasian Economic Review*, vol.7:329–351

14 Ladner, A. (2017) Ibid.

15 Schwab, C., Bouckaert, G. and Kuhlmann, S. (2017) Ibid.

16 For a list of governments which have declared a 'climate emergency' see <http://climateemergencydeclaration.org/climate-emergency-declarations-cover-15-million-citizens>

that LGs could engage with in future, if they have sufficient funds to do so.¹⁷ That agenda invites consideration of how to prepare for a breakdown or collapse in societies due to impacts of climate change. Such an agenda is daunting even if well-resourced, and yet LGs face ever greater difficulty in carrying out existing functions. It is this conundrum which the proposal for LFTCs seeks to respond.

Increase in Local Government borrowing

As a result of funding cuts, most LGs in Western Europe and, increasingly, Eastern Europe, have been forced further and further into debt.¹⁸ For example, in Poland and Hungary, perverse effects of the EU Cohesion Policy have driven LGs into debt.¹⁹ As for the UK, the government has been pushing LGs to consider taking loans from private banks instead of the Public Works Loan Board (PWLB), despite the risks of becoming locked in odious debt situations through long-term "Lender Option Borrower Option" (LOBO) loans. Local Authority reports from 2017 show five of them are now paying **more than half of their income on interest to banks**. Newham Council was even paying 125% of its council tax income on servicing such loans.²⁰

LG debt to GDP ratio in EU countries grew from an average of 5.5% in 2008 to 12.5% in 2016.^{21 22} It should be noted that the proportion of LG debt to GDP varies greatly among EU countries based on national governance, with federal countries showing a much larger share of LG debt: thus, in 2015, LG debt stood as 27.5% of national GDP in Germany, 26.5% in Spain, and 18.3% in Belgium, as compared to 9% in France, 8.4% in Italy, 4.7% in the UK, 4.2% in Poland and 0.9% in Greece.²³

As a percentage of LG revenues in the EU, debt grew from an average ratio of 37.8% in 2008 to 49.0% in 2012.²⁴ Here again, circumstances vary widely: within the EU, within countries (depending on regional prosperity levels), and between

17 The paper 'Deep Adaptation: A map for navigating the climate tragedy' achieved 400K hits in the year since its publication, according to its author Jem Bendell. In addition, the growth of Extinction Rebellion and Friday for the Future movements all indicate a dramatic upsurge in awareness and concern.

18 Kluza, K. (2014) Ibid.

19 Medve-Bálint, G. and Bohle, D. (2016), "Local Government Debt and EU Funds in the Eastern Member States: The Cases of Hungary and Poland", *Working Paper No. 33*, November 2016, "Maximizing the integration capacity of the European Union: Lessons of and prospects for enlargement and beyond" (MAXCAP).

20 Debt Resistance UK (2016) "Local Authority Debt Audits". Available at: issuu.com/debtresistanceuk/docs/16.02.09_lada_booklet_revised_final

21 Kluza, K. (2016), "Sustainability of Local Government Sector Debt. Evidence from Monte-Carlo Simulations", *Lex Localis - Journal of Local Self-Government*, Vol. 14, No. 1, pp. 115-132

22 Laignel, A. and Guené, C. (2017), "Les finances des collectivités locales en 2017 - État des lieux", *Rapport de l'observatoire des finances locales*. Available at: www.ladocumentationfrancaise.fr/rapports-publics/174000681-les-finances-des-collectivites-locales-en-2017-etat-des-lieux

23 Laignel, A. and Guené, C. (2016) Ibid.

24 Kluza, K. (2014) Ibid.

local government levels (state/province vs. municipalities). Besides, different accounting standards often make international comparisons difficult.

Nonetheless, Fig 1²⁵ and Fig 2²⁶ below provide an overview of how LG debt-to-revenue has tended to increase in the wake of the 2008 financial crisis — most notably in Southern European countries such as Spain and Portugal, but also in Ireland, Germany, or Poland; we can also observe the wide-ranging disparities that may exist within a single country, with German debt levels providing a striking example:

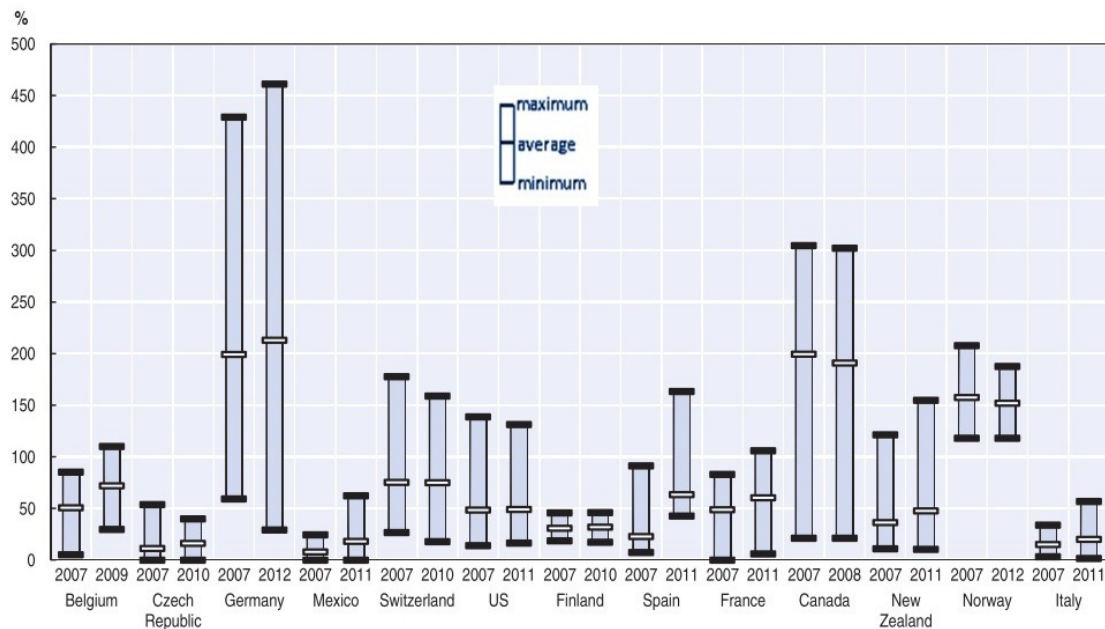


Fig 1: LG debt as a percentage of revenue, various years (source: OECD)

This increased debt affects LG ability to provide public services, deteriorates their debt repayment capacity, and exposes them to the risk of interest rates rising.²⁷

The UK government has previously held wide-ranging powers to limit or ‘cap’ increases in council tax but though these caps are being lifted, increases in taxes are still subject to approval of taxpayers via a local referenda.²⁸

25 Hulbert, C. & Vammalle, C. (2016), “Monitoring Sub-central Governments’ Debts: Practices and Challenges in OECD Countries”, *Workshop RIFDE-GEN+ “Sostenibilidad fiscal y haciendas subcentrales en España: desafíos y reformas”*, RIFDE. Available at: rifde.info/documentos/papeles/01_Monitoring_Sub-central_Governments_Debts.pdf

26 Hulbert, C. & Vammalle, C. (2016), *Ibid.*

27 Kluza, K. (2017) *Ibid.*

28 East Sussex County Council (2019), “Overview of how local government finance works.” Available at: www.eastsussex.gov.uk/yourcouncil/finance/guide

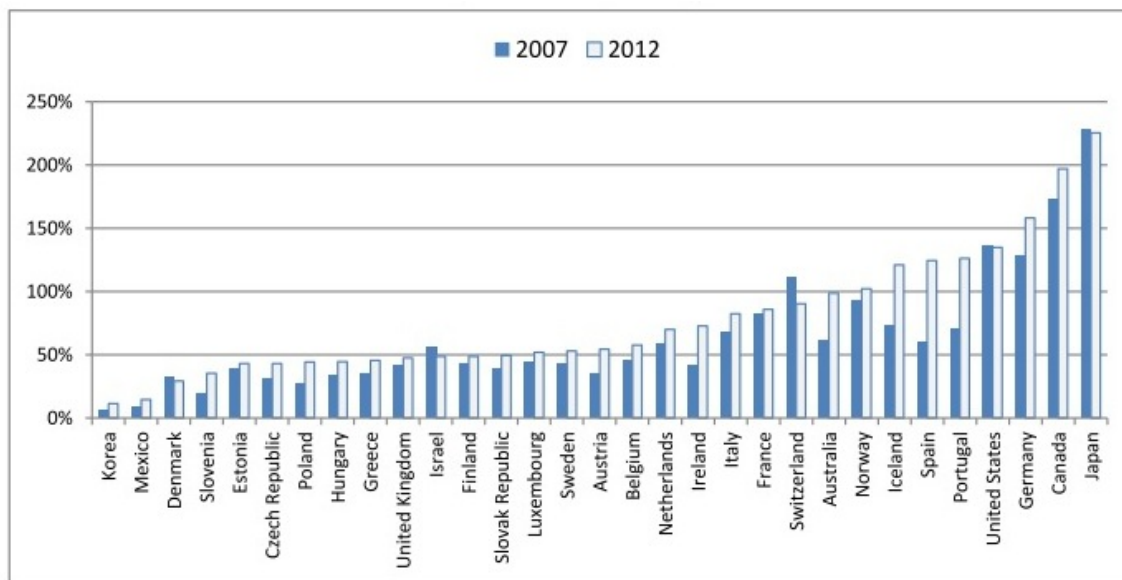


Fig 2: Evolution of LG debt as percentage of revenue, 2007-2012 (source: OECD)

Currently LGs in the UK are responsible for setting their own borrowing limits. The PWLB states that “Local authorities have the power to determine how much debt they can take on to deliver services. Each local authority sets its own debt limit. In doing so, the authority will need to be confident that it can service the debt, without the costs of doing so adversely impacting on service delivery.”²⁹

There are few things LGs can do to increase efficiency. In July 2019, Brighton & Hove announced plans to crack down on unpaid council tax as a £5m funding gap was expected to become £15m the following year.³⁰

However, as finances are squeezed, LGs have few other options than to increase their borrowing limits, and/or make increasingly risky investments. Although LGs rarely default on loans due to Central Government guarantees, several European municipalities are reported to be on the brink of ‘bankruptcy’: Northamptonshire Council UK is one³¹, and Ostrowice Borough (Poland) faced a liquidation in 2018.³²

29 Ministry of Housing, Communities and Local Government (2019), “Local Government Financial Statistics, England, No.29, 2019”, article 5.1.1. Available at: http://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/814118/Local_government_financial_stats_number_29_2019_Web_Accessible.pdf

30 The Argus (2019), “Brighton council plans to crack down on unpaid council tax” (1 August). EAvailable at: www.theargus.co.uk/news/17808580.brighton-council-plans-crack-unpaid-council-tax

31 The Guardian (2018), “Tory county council runs out of cash to meet obligations” (3 February). Available at: www.theguardian.com/society/2018/feb/02/tory-run-council-runs-out-of-money-to-meet-obligations

32 Kluza, K. (2017) Ibid.

While discussing this level of extreme indebtedness, we wish to point out that in principle public utilities delivering value year on year should only ever need to borrow small amounts of money for cashflow purposes and that their average deficit should be zero (notwithstanding the Modern Monetary Theory arguments about national governments). In a properly run system, taxes collected in one year would fund the activities of that same year, not of previous years and nor of interest on the difference. By that logic, the levels of local governments now regarded as normal, could be indicative of mismanagement. The proposal presented below therefore could be regarded as a less onerous form of borrowing for local governments who are struggling financially – not as an ideal form of local government finance, because ideally local governments could live within their means, year on year.

Political and social impacts of European austerity

Besides the aforementioned cuts in transfers from central governments, austerity policies enacted since 2008 have also had major political and social impacts on European LGs. Democratic processes have occasionally been ignored due to the financial exigencies of austerity policies, as in the case of the overturned Greek referendum in 2015³³, or Hungary in 2012: in the latter case, rising levels of indebtedness were widely used to force municipalities to relinquish to the central state many of their decision-making powers.³⁴

In countries such as Spain and Italy, regional governments have been charged by their respective central governments of dragging their feet in implementing national-level “consolidation plans”. For instance, in December 2017, the Municipality of Madrid was pressured by Finance Minister Montero to enact large budget cuts to many social services, despite the Municipality having succeeded in accumulating a budgetary surplus, and in halving its debt levels since 2012.³⁵

Other Spanish municipalities are being forced to comply with similarly stringent austerity imperatives, especially when trying to enact more progressive economic agendas, creating tensions between them and central government.³⁶ Overall, in Spain, LG autonomy has been compromised by central government policies affecting their financial sustainability and public debt levels.³⁷

33 The Telegraph (2015), “Bewildered Greeks left wondering what happened to referendum 'No' vote” (11 July). Available at: www.telegraph.co.uk/news/worldnews/europe/greece/11733777/Bewildered-Greeks-left-wondering-what-happened-to-referendum-No-vote.html

34 Medve-Bálint, G. and Bohle, D. (2016) Ibid.

35 Duval, J. (2017), “Tragédie à la grecque à la mairie de Madrid ?”, *Comité pour l'abolition des dettes illégitimes*, 20 December. Available at: www.cadtm.org/Tragedie-a-la-grecque-a-la-mairie

36 Duval, J. and Ambroj, A. (2018), “Espagne: les municipalités réduisent leurs dettes, celle de l'État marque un nouveau record.” *Comité pour l'abolition des dettes illégitimes*, 15 March. Available at: www.cadtm.org/Espagne-les-municipalites

37 Ladner, A. (2017) Ibid.

The Italian government has publically accused its LGs of inefficiency, then coerced regions into accepting greater central government control over finance or budgets as well as significant budgetary cuts. The packages of measures enacted since 2011 have been described as favouring “creeping recentralization and a degrading of local autonomy.”³⁸ Besides the loss of local political autonomy, negative impacts have also reinforced regional inequalities in the country, with the poorest Southern regions bearing the brunt of the austerity programs.³⁹ 270 Italian municipalities, mostly in the south of the country, enacted “pre-crisis procedure” plans, which place them under stricter central government supervision and deeper social spending cuts.⁴⁰

The impacts of austerity measures on healthcare systems have been a major cause for concern in many countries.⁴¹ Overall, spending cuts hit the most vulnerable social groups most strongly, affecting poverty relief or schooling programs, and widening economic and social inequalities.⁴² In England, for example, spending on social care rose by 8 per cent in more affluent councils, but fell by 14 per cent in more deprived areas between 2010 and 2016; and the most deprived LGs have seen general social spending cuts of £220 per head, compared to £40 per head in the least deprived.⁴³

Systemic financial risk higher than ever

The 2008 financial crisis revealed how LGs even in developed countries were exposed to macro-financial risk. LGs in UK were first hit by the collapse of Ice-save, where many of them were keeping working capital in high interest accounts,⁴⁴ and again in the decade since, as the government bailouts were financed from future funding of LGs.

Mainstream economists who failed to warn of the 2008 crisis believe the financial system is now safer⁴⁵ as a result of the regulation⁴⁶ enacted in the wake of that

38 Ladner, A. (2017) Ibid.

39 Del Pino, E. and Pavolini, E. (2015), “Decentralisation At a Time of Harsh Austerity: Multilevel Governance and the Welfare State in Spain and Italy Facing the Crisis”, *European Journal of Social Security*, vol.2, pp.246-270

40 Filoni, C. (2017) Ibid.

41 Stuckler, D., Reeves, A., Loopstra, R., Karanikolos, M. and McKee, M. (2017) “Austerity and health: the impact in the UK and Europe.” *European Journal of Public Health*, vol.27, (4), pp. 18-21

42 Donald, B., Glasmeier, A., Gray, M. & Lobao, L. (2014) Ibid.

43 Hastings, A., Bailey, N., Bramley, G., Gannon, M. and Watkins, D. (2015), “The Cost of the Cuts: The Impact on Local Government and Poorer Communities”, *Joseph Rowntree Foundation Report*.

44 See This is Money (2010) “Counting the cost of Iceland’s crash” (13 April). Available at www.thisismoney.co.uk/money/article-1265818/CITY-FOCUS-Counting-cost-Iceland-crash.html

45 Financial Stability Board (2017) “How is the Financial System Safer?” (3 July). Available at www.fsb.org/multimedia/safer

46 Wikipedia (2019) “Regulatory responses to the financial crisis” Available at http://en.wikipedia.org/wiki/Regulatory_responses_to_the_subprime_crisis

crisis; however the contrary belief is also widespread: that the economic fundamentals are unchanged; risk is now even more concentrated; and that another, even larger crisis is inevitable.⁴⁷

Indeed, Oxfam USA reported on the how growth of the five biggest banks was stayed neither by crisis nor by the regulation which followed. (See Fig 3)⁴⁸

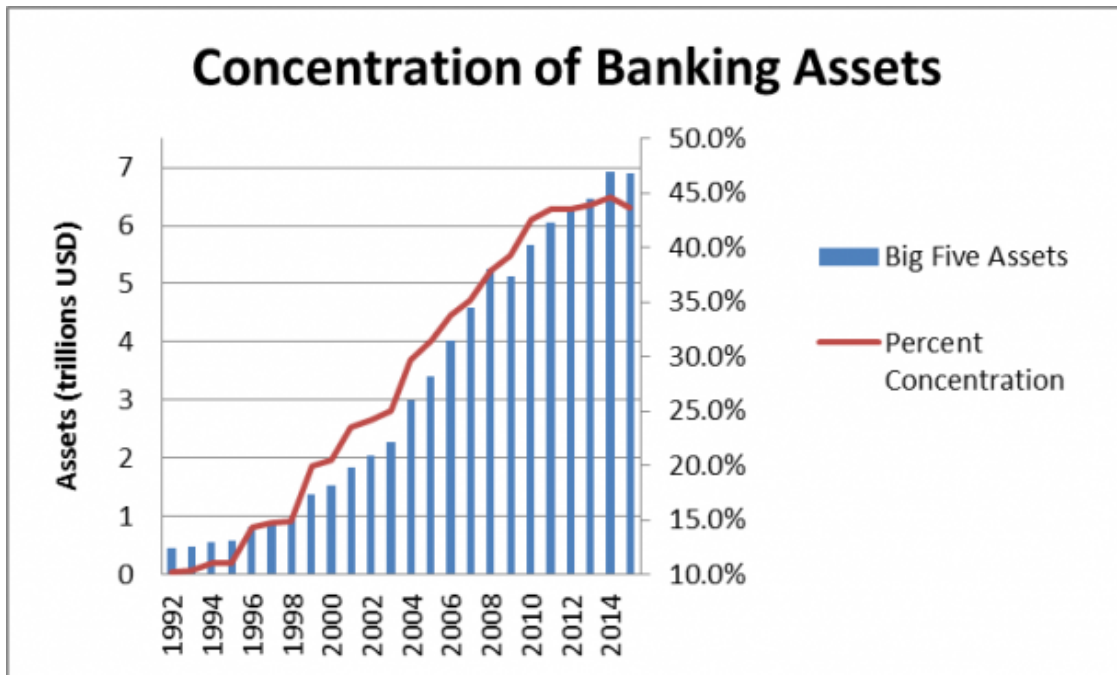


Fig 3: “Concentration of banking assets (Oxfam)

The costs of starting a new bank are extremely high, and most of the technological innovation happening in banking is financed by banks who thus ensure their own continuity.⁴⁹ As the banking sector becomes increasingly centralised, not only does the lack of diversity mean greater risk, but the capitalist tenets of free competition and level playing-fields themselves are cast aside, leading to increased risk of systemic failure and to monopolistic behaviours.⁵⁰

47 Typical example being in The Week (2018) “Global Financial System Facing ‘perfect Storm’” (23 January). Available at www.theweek.co.uk/91129/global-financial-system-facing-perfect-storm

48 Oxfam America (2016) “Too Big To Fail and Only Getting Bigger” Available at <http://politicsofpoverty.oxfamamerica.org/2016/01/too-big-to-fail-and-only-getting-bigger>

49 J. P. Morgan (2017) “How FinTech and Banks are Partnering” Available at <https://www.jpmorgan.com/commercial-banking/insights/fintech-banks-partnering>

50 L.A. Times (2011) “Biggest banks threaten ‘future of capitalism,’ Fed official says” (June 27). Available at https://latimesblogs.latimes.com/money_co/2011/06/banks-tbtf-sifi-systemically-important-fed-hoening-glass-steagall.html

UK Local authorities forced to be 'creative'

Local governments have been trying many creative solutions to access more money or at least improve cashflow. In practice that means they are driven to measures like borrowing more from 'other financial intermediaries'⁵¹ such as pension funds, or starting property development companies.

In 2015 a report from Localis, a think-tank whose website does not disclose its donors, revealed that 58% of councils owned a trading company and anticipated full coverage by 2020. The report contended that "councils should further this entrepreneurial agenda."⁵² This ideological standpoint that LGs, with more responsibilities than income, must therefore earn the difference in the marketplace, is becoming pervasive.

In 2012 local authorities were granted the power to build houses for the first time since the 1980s, and the PWLB makes credit available for construction projects. The *Financial Times* reported that Spelthorne borough council – which has assets of just £88m – bought a business park in Sunbury-on-Thames for £360m.⁵³ This exposes the council's assets to risk in the property markets; it also exemplifies the philosophical problem of taxpayers' money being exposed to risk at all.

According to *The Guardian*, "More than a third of UK local authorities are now setting up their own housebuilding companies."⁵⁴ The article also notes that business and profit and private ownership may be more important than the council's responsibility to provide housing: "The government's housing white paper praised these 'innovative models' of council-led housebuilding, but it also declared that the right to buy should be extended to such properties, potentially putting all this new stock of social rented housing in jeopardy."

Preston city council is innovating financially – but not in the expected capitalist paradigm. Instead it has stepped up its commitment to procurement from local organisations and from cooperatives. This approach is being dubbed 'New Municipalism'.⁵⁵

51 Table 5.1a [of the article] shows borrowing from banks decreasing but from 'Other Financial Intermediaries' increasing over the period 2013-2018
http://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/814118/Local_government_financial_stats_number_29_2019_Web_Accessible.pdf

52 Report is summarised and available for download at
www.localis.org.uk/research/commercial-councils-the-rise-of-entrepreneurialism-in-local-government

53 See *The Guardian* 29 April 2017, above.

54 *The Guardian* (2017) "Out of the box: councils try innovative projects to provide social housing" Available at www.theguardian.com/society/2017/feb/10/councils-innovative-projects-social-housing

55 *New Statesman* (2019) "What is New Municipalism and can it really combat austerity" Available at www.newstatesman.com/spotlight/2019/04/what-new-municipalism-and-can-it-really-combat-austerity

Local Government Currency Innovation

One way that LGs might seek to be creative in the face of a financial predicament, is through experimenting with the creation or backing of local or complementary currencies. Complementary Currencies (CCs), can be defined as “currencies which are not issued by sovereign nation-states or by the designate of states, e.g. central banks, to which nation-states, or, in the case of the euro, a collection of nation-states, grant the exclusive right, usually a monopoly, to issue currency.”⁵⁶

Surveys of CCs established over the past decades in the UK and Europe show little evidence of such alternative currencies being started by Local Authorities — with the notable exception of SoNantes, in the French city of Nantes.⁵⁷ The lack of LG leadership on such currencies may be due to the political challenge this might represent within the current state-money paradigm.⁵⁸ However, there are examples of Local Authorities embracing CCs launched by groups of businesses and/or citizens, which we will briefly summarise.

In 2010, the Austrian state of Vorarlberg allowed partial tax payments in the local CC, Talente.⁵⁹ In the UK, local Councils in Bristol and the London Borough of Lambeth respectively accept the Bristol Pound and the Brixton Pound for business tax payments, business licenses, and other municipal services. The Bristol Pound is also accepted for Council Tax since April 1st, 2015,⁶⁰ while Local Authority employees of Lambeth Council may opt to be paid part of their salary in the Brixton Pound.⁶¹ Similarly, in France, the City of Bayonne accepts tax payments in Eusko, and is now about to start paying its employees in this same currency.⁶²

56 Peacock, M. S. (2014), “Complementary currencies: History, theory, prospects.” *Local Economy*, vol. 29(6-7) pp.708-722

57 SoNantes is a currency operated and managed since 2015 by the Crédit Municipal de Nantes, with the support of the City of Nantes, the inter-municipal structure Nantes Métropole, and local chambers of commerce. See: <https://www.sonantes.fr> and <http://community-currency.info/en/currencies/sonantes>
A noteworthy precursor of SoNantes is the SOL, a complementary currency that has been deployed in several regions of France since 2007. Although associations of local citizens have been at the heart of this project, it has received the support of French regional authorities and funding from the EQUAL program of the Social European Fund. See: Blanc, J. & Fare, M. (2010), “Les monnaies sociales en tant que dispositifs innovants : une évaluation”, *Xe Rencontres du réseau inter-universitaire de l'économie sociale et solidaire (RI-UJESS) : “Elaborer un corpus théorique de l'économie sociale et solidaire pour un autre modèle de société”*, Jun 2010, Luxembourg, Luxembourg

58 Lietaer, B., Kennedy, M. and Rogers, J. (2012) *People Money: The Promise of Regional Currencies*, Axminster, UK: Triarchy Press, p.55

59 Lietaer, B., Kennedy, M. and Rogers, J. (2012) *Ibid.* p.125

60 Community Currencies in Action (2015), “An Overview of the Legal and Regulatory Framework for Complementary Currencies in the United Kingdom”. Available at: <http://communitycurrenciesinaction.eu/toolkit-legal-and-compliance>

61 Brixton Pound (2018), “Payroll Local”. Available at: <http://brixtonpound.org/payroll>

62 Saint-André, B. (2018), “La justice donne raison à la Ville de Bayonne sur l'eusko”, *Mediabask*, 30 March. Available at: https://mediabask.naiz.eus/eu/info_mbsk/20180329/la-justice-donne-raison-a-la-ville-de-bayonne-sur-l-eusko

These are important signals as regards public perception of the legality and reliability of alternative means of payment, especially in the case of the Bristol Pound and the Eusko, which rank as two of the three largest CC systems in Europe in terms of network size and total money supply.⁶³

However, most of these initiatives have had little economic impact nor developed robust alternative non-banking means of payment in their economies. Therefore, we concluded that it is important to explore ways that LGs themselves could build upon their existing functions and infrastructure to create CCs and associated payment systems which could scale. Hence, the proposal for Local Future Tax Credits (LFTCs), which we now introduce.

63 Etcheleku, P. (2017), "La monnaie locale basque eusko se dématérialise", *Les Échos*, 31 January. Available at: https://www.lesechos.fr/30/01/2017/LesEchos/22372-121-ECH_la-monnaie-locale-basque-eusko-se-dematerialise.htm

Local Future Tax Credits (LFTCs)

Decision-makers face an agonising dilemma between reducing essential services this year, or reducing them even more in future years by borrowing at interest. Those decisions are taken not in the name of local residents and local businesses, but on behalf of banks that have no accountability to the local people. Growing public awareness of how their taxes are not funding local services but the profits of banks could trigger a crisis of legitimacy for LGs and their tax collection functions.

Besides, while LGs are being pushed into both greater debt and commercial activities, we've yet to see local governments embrace both at once by selling their own debt. Tax collecting authorities have the intrinsic ability to guarantee debt and therefore have no intrinsic need of commercial lenders.

Added to this difficult financial context is the climate emergency, which many councils have pledged to address. The need not only to reduce and draw down carbon but also help their communities adapt to the impacts of changing weather, both locally and globally, invites major new investments of time and money. Recognising this dilemma, we offer the idea of local currency innovation as one response that LGs can adopt. There are many such initiatives, but the one we wish to focus on in this Occasional Paper, is where LGs issue Local Future Tax Credits (LFTCs). This currency innovation could be a way for LGs to increase their cash flow without increasing borrowing from banks, raising taxes or selling assets. In addition, it could incentivise local resilience to disruption from climate change, by encouraging local trade and provided a means of transaction that is not dependent on the global financial system.

We will explain the possible mechanisms of LFTCs below. In summary, they could be regarded as a form of local government bonds except that

- They could be bought over the counter or online in small denominations,
- They would be automatically liquidated as the bearer's tax came due, making tax collection cheaper

To LGs, LFTCs could become a way to spend taxes before they even come due, without permission from a financial intermediary, and at less cost. To taxpayers (people or institutions) with surplus cash LFTCs could be a way to pay tax in advance and get a discount higher than the rate of bank interest; they combine the favourable interest rate of a savings account with the convenience of a current account.

In other words, local governments could be providing 'savings accounts' in the commercial marketplace at competitive rates of interest. In section 3 'Beyond Tax Credits' we show how additional financial services could follow very easily, and thus develop greater resilience within the local economy.

An untapped form of finance

Currently LGs are subject to commercial lenders terms, especially with LOBO loans, but LFTCs designed and issued by LGs could change the balance of power. The LFTC would be a non-withdrawable financial instrument, which means the local government could spend it immediately, marking up the taxpayer's account with the balance. The balance, indicating prepaid taxes, would be marked up daily or monthly similar to how bank balances accrue interest. As local taxes came due, the balance would be automatically decremented by the amount of tax owing.

In effect, the LG could borrow from taxpayers instead of from private institutions at commercial lending rates. Meanwhile local businesses and residents would benefit from a higher rate of interest than their bank could offer retail customers. These increases would come from dis-intermediating the commercial lenders. The money saved by both lender and borrower would likely yield secondary benefits in the local economy.

If a taxpayer did have an urgent need for cash, the LG might allow extraordinary redemptions for a significant markdown, say 20%. (See Further question: *What should the withdrawal policy be?*)

The launch and scaling of LFTCs could provide LGs with a significant near-term cashflow boost. However, LFTCs are a source of borrowing, not of capital and do not provide the means to settle LG debt - except over the long term, by making debt more manageable. In principle LGs should still balance their books at the end of each year.

Past Experiences with Tax Credits

Innovative as tax credits may sound, similar techniques have historically been standard policy tools. Before Britain's global primacy enabled her to operate the first gold standard, she was financed by tax credits for 600 years.⁶⁴

However, all the recent examples of tax credits we know of happened only during times of severe financial stress, when commercial banks were not lending. The most widespread example is during the Great Depression in USA and German-speaking Europe.⁶⁵ As thousands of municipal governments in USA were defaulting on debts, several state legislatures authorised Tax Anticipation Scrip (TAS) financing, which was implemented by over a hundred LGs, sometimes on a large scale: the city of Detroit, for instance, issued and circulated over \$40m in

64 UK Parliament (2019) "Tally Sticks" Available at www.parliament.uk/about/living-heritage/building/palace/estatehistory/from-the-parliamentary-collections/fire-of-westminster/tallysticks

65 Gatch, L. (2008), "Local Money in the United States During the Great Depression." The Economic & Business History Society, Vol.26. Available at: www.ebhsoc.org/journal/index.php/journal/article/view/6/6

TAS between 1933 and 1934. Among other benefits, TAS was shown to increase the purchasing power of local governments, and to provide a powerful economic stimulus to local communities. It “functioned legally as a flexible form of short-term credit that enabled governments to meet payrolls, pay vendors, and otherwise make up for shortfalls in the tax receipts from economically-strapped communities.”⁶⁶

More recently, Argentine federal and provincial governments used tax credits after the country defaulted on its debt in the early 2000s. One estimate puts locally-issued tax anticipation notes at one third of Argentina’s money supply in 2002.⁶⁷

As recently as 2009 the state of California struggling to pay its bills in the post 2008 recession, issued 450,000 short term IOUs with a value of \$2.6bn as ‘registered warrants’ to pay benefits, tax rebates and other bills⁶⁸, amounting to 3 per cent of its annual expenditure.⁶⁹

We are not aware of tax anticipation systems currently in use, though we have been unable to conduct a systematic survey of Local Governments worldwide ahead of preparing this Occasional Paper.

It is worthy of note that former Greek Finance Minister Yannis Varoufakis argues that ‘fiscal money’ - another name for government credit - could fix the broken Euro. Since he was unable to implement it at the national level in Greece in 2015, Italy is proposing a variation on the same idea in 2019.⁷⁰

If tax anticipation is so much better for governments than commercial credit, we do not know why it mostly fell out of use in the 19th Century, only to return at moments when commercial credit wasn’t available. This could be an example of commercial lenders influencing government policy.

66 Gatch, L. (2012), “Tax Anticipation Scrip as a Form of Local Currency in the USA During the 1930s”, *International Journal of Community Currency Research*, vol. 16, Section D 22-35. Available at: <https://ijccr.net/2012/07/02/tax-anticipation-scrip-as-a-form-of-local-currency-in-the-usa-during-the-1930s/>

67 Gómez, G. (2009) *Argentina’s Parallel Currency: The Economy of the Poor*. London: Pickering & Chatto, p.54

68 California State Controller’s Office (2009), “State Controller’s Office Information on Registered Warrants (IOUs) Issued in 2009”. Available at: www.sco.ca.gov/eo_news_registeredwarrants.html

69 *Ballotpedia.org* (2009) “California state budget (2008-2009)”. Available at: [ballotpedia.org/California_state_budget_\(2008-2009\)](http://ballotpedia.org/California_state_budget_(2008-2009))

70 Yannis Varoufakis "Fiscal Money Can Make or Break the Euro" Available at www.project-syndicate.org/commentary/italy-parallel-payments-system-versus-greece-plan-by-yannis-varoufakis-2019-06

Beyond Tax Credits

If LFTCs were only used to finance LGs, we have shown they would be a boon to both them and the taxpayers because they would be lending and borrowing to each other without middlemen. However, a well-designed online accounting system could be easily extended to provide multiple other benefits, as additional financial services, to taxpayers; and the additional utility of LFTCs would entice more people to buy them. If designed with the intention, such a payment system could grow to provide a means of financial transaction that is not dependent on the banking system. That would mean that local trade would not be dependent on continuing confidence in the international banks and therefore provide an alternative to any future breakdown or collapse in those banks. That would be a key step towards greater resilience in the face of disruption from climate chaos. In this section we will explain more about how LFTCs could grow to become such an alternative payment system.

A Publicly Owned Payments System

This ability to pay, and accept payments, using prepaid taxes in an LG account would dramatically increase the appeal of LFTCs as an interest-bearing store of value by also making them useful as a means of exchange, and thus attract citizens to prepay more taxes.

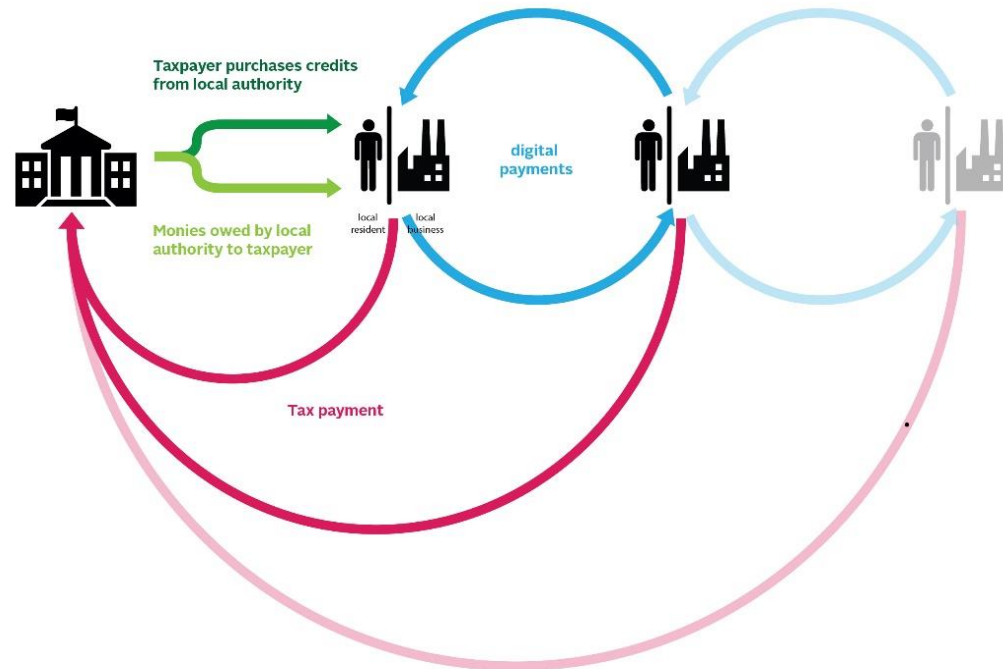
Payment networks are now fairly easy to implement from a software point of view. The real problem is getting enough members who need to pay each other, such that they can make efficient payments across the new network without paying the banking cartel to use its infrastructure. LGs overcome this problem because they already have the critical mass to operate a payments network. All taxpayers already have an account. All that would be needed is an 'online banking' app for the taxpayer to instruct that their LFTCs be moved to another taxpayer's account.

This would not be like making a withdrawal because the LG has still spent the money; what is transferred is simply the receipt for having paid tax to that LG. The LG doesn't care who holds those receipts - it only cares whether taxpayers have enough receipts when their taxes come due. In this way while the money is financing local government, the virtual receipts can change hands many times, adding liquidity to local trade.

The diagram shows LFTCs being issued to taxpayers, circulating in the local economy and, and returning to the LG as taxes are deducted.

PHASE I
Establishing a multilateral digital payments platform
using a Local Tax Office's existing online services

LOCAL TAX CREDIT ISSUANCE
LOCAL TAX CREDIT TRANSFERS
LOCAL TAX CREDIT REDEMPTION



More sophisticated payments infrastructure could follow the app as the system gained acceptance, such as point of sale systems in shops, plastic cards, vouchers, direct debits etc.

By providing a non-commercial alternative, this publicly-owned payments system would introduce much-needed diversity into the payments markets. It would help to keep the commercial networks in check and provide a measure of systemic resilience to bank failures: prepaid taxes and the payment system between accounts would be unaffected if over-leveraged and under capitalised banks ran out of money.

This payments function could be extended to include issuance of new LFTCs. That means an LG could pay its bills (to local suppliers who are also taxpayers) by simply crediting their tax account. LGs would find it cheaper to subcontract their own taxpayers (i.e local providers) because they would be more easily able to pay with LFTCs than with scarce legal tender money. Suppliers could still demand legal tender, but as confidence in LFTCs grew, they should be increasingly willing to accept LFTCs, meaning effectively that they would be paying their local taxes *in kind*.

Moving prepaid tax balances between accounts would create ambiguities when it came to calculating the interest earned. Would the interest be earned in the year that the account balance was incremented and the extra balance became available to settle debts within the system? Or would the interest only be registered when the current year's tax was deducted from the prepaid tax balance? In practice there is almost no difference, especially considering most users are well below the tax threshold for interest receipts. Tax authorities could be helpful so far as to overlook LFTC tax allowances, at least for an experimental period, or could make LFTCs unviable through onerous reporting requirements.

Payments between LG territories

Taxpayers using the payments facility would soon seek to use it for longer-distance transactions also. The next logical step would be to connect up all the LGs to allow payments between territories. The banking system spent decades if not centuries building systems like Bankers' Automated Clearing Services (BACS) and the Society for Worldwide Interbank Financial Telecommunication (SWIFT), but this can now be done (to a large extent) with open protocols and free software. Again, the more useful the system would be, the more capital it would attract, and all the capital in the system effectively counts twice, once as government finance, and at the same time as trade credit.

The clearing mechanism would also serve for local authorities to pay their own suppliers from other territories, reducing the need for money even further. We imagine LFTC enabling bank-free payments all over Europe.

The mechanism for trading between territories is known in the banking world, where actual money rarely changes hands, as credit clearing. This simply refers to the process of cancelling out payments going in opposing directions and periodically 'settling' the difference using money. Clearing systems enable more trade between members using a fraction of legal tender money because income and expenditure between members of the system are cancelled out; money is only needed to pay the difference. Insofar as an entity's income equals its expenditure with respect to other entities in the clearing system, no actual money changes hands.

Payments between issuers of different financial instruments give rise to a set of political problems which would need to be addressed by the participating LGs collectively. For this to happen, four things need to be in place.

1. **LGs must agree to accept each other's tax credits at parity**, in the same way that Germany and Greece agree to accept each other's Euros at the same face value even though their creditworthiness is very different. This is critical for the usability of the system, because if each issuer's credit is valued differently then users have difficulty pricing things, and there is also a risk of losing value as the exchange rate moves. Since LGs have

access to the debt collection organs of the state, all their credit can be considered risk-free and traded at face-value i.e. 1 LFTC from any LG is worth exactly £1 sterling.

2. An LG could theoretically run up a deficit with respect to other LGs that it would struggle to settle in cash. Therefore **deficit limits should be agreed beyond which an LG would be unable to trade with other LGs**. To restart trade, a deficit LG would need to supply goods/services or cash to a surplus LG to bring them back within the range of credit tolerance. LGs could not and must not attempt to accumulate a surplus of LFTCs from other LGs in hope of forcing other LGs to settle with cash. All efforts should be made to exchange goods and services before settlement with cash. Settlement would be *the last resort* which the LFTC clearing system was designed to minimise. In principle each LG should aim to supply and consume in equal quantities with respect to other LGs
3. **If different LGs were paying different rates of interest, the system should be designed so that LGs in surplus would *not* pay the 'interest' on another LGs LFTCs**. Otherwise taxpayers would attempt to move their positive balances to the territory with the highest yield, which would exacerbate the problems LFTCs were supposed to solve.

As more LGs across the country participated in LFTCs, a payment/clearing system would emerge which was complementary to, but autonomous from, the commercial networks. The LFTC system should be more cost-effective than banking networks because

- LFTCs would be subject to less regulation than banks, because unlike bank deposits LFTCs could not be withdrawn / converted to legal tender.
- LGs would have a captive user base, in taxpayers.
- There could be further revenue from transaction fees.
- The cost of collecting local taxes would be reduced because more people would be paying more readily.

Further research is needed on the diversity or compatibility of the accounting software used by local governments to keep taxpayer accounts and how they could be connected.

Overdraft facilities

LGs could at their discretion allow taxpayer accounts to become overdrawn, in other words allow late payment of taxes. Then instead of paying interest on early taxes, LGs could collect interest on late taxes. This might be more efficient than

how late payers are currently handled. This credit facility would not aim to compete with commercial credit providers, since the purpose of LFTCs is for taxpayers to provide credit to the LG, not vice versa. However the ability to delay tax payments for a fee could be a source of revenue and a lifeline to business struggling with cashflow.

Further research is needed on what currently happens to late payers of tax. If late tax were charged at a rate of interest, how would that skew incentives to delay tax payments?

LFTCs for finance

The stated purpose of LFTCs so far has been to help with cashflow. By borrowing more cheaply from citizens than from banks, local governments would pay less interest and hopefully eventually get back on top of their budgets. However we note that only rarely in history does government debt ever go down, least of all in stressed times. Furthermore, the need for climate adaptation could be judged more urgent than paying down old debt, especially while interest rates are at historical lows. Consequently tax credits could be used not merely for cashflow but to increase the long term indebtedness of government – the purpose for which bonds were invented.

Further research is needed on what would be the substantial differences between LFTCs and bonds, and what would be the best use of each?

NFTCs

All we've proposed for local government applies equally well for national governments as well. The main difference is that, as Modern Monetary Theory points out, "MMT proposes that a country with its own currency, such as the U.S., doesn't have to worry about accumulating too much debt because it can always print more money to pay interest"⁷¹. According to MMT a national government which has a monopoly on the use of force, and hence the sovereign power to underwrite debts, has no need to rent money either from banks or from citizens. That the government does this, comes down to a profound misunderstanding which dates back to eras when gold itself was money.

Recent proposals by Positive Money and others that every citizen should have an account in the central bank do resemble the LFTC proposal, but the intention is to restore government's control over monetary policy,⁷² rather than to use citizens' savings to finance government.

71 Bloomberg (2019) "Warren Buffett Hates It. AOC Is for It. A Beginner's Guide to Modern Monetary Theory" (March 21) Available at <https://www.bloomberg.com/news/features/2019-03-21/modern-monetary-theory-beginner-s-guide>

72 Positive Money (2018) "Positive Money's digital cash proposals find support in new Bank of England research" Available at www.positivemoney.org/2018/05/positive-moneys-digital-cash-proposals-find-support-new-bank-england-research

Concerns and Questions Arising

In our discussions about LFTCs with various experts, a number of concerns and questions have arisen. In concluding this Occasional Paper, we respond to some of the typical ones, while recognising further research is needed.

What is the legal status of LFTCs?

The new system should not be mistaken for a bond issuance or any kind of financial security. LFTCs should not be negotiable instruments but should only change hands at parity with the national currency. Since a tax-credit represents a pre-purchase of an item of monetary value, policymakers may regard them as a form of e-money. If so, then the exemption for local government in the 2009 E-Money Directive of the EU applies (see Box 1). If that exemption were to be challenged, we believe other qualities of the LFTCs would qualify them for other exemptions. In particular, LFTCs would not actually be redeemable for national currency as e-money is supposed to be.

Box 1. E-money - Directive 2009/110/EC

Article 1:

"1. This Directive lays down the rules for the pursuit of the activity of issuing electronic money to which end the Member States shall recognise the following categories of electronic money issuer:

... (e) Member States or their regional or local authorities when acting in their capacity as public authorities."

Article 3:

"This Directive does not apply to the following:

... (k) services based on specific payment instruments that can be used only in a limited way, that meet one of the following conditions:...

... (iii) instruments valid only in a single Member State provided at the request of an undertaking or a public sector entity and regulated by a national or regional public authority for specific social or tax purposes to acquire specific goods or services from suppliers having a commercial agreement with the issuer."

Should there be issuance constraints?

Currently councils' borrowing is restricted by terms determined by commercial lenders, which we note is independent of what is best for the public. Any institution which can issue its own credit instrument on its own terms has an incentive to issue too many, especially to non-expert investors like the general public. LGs would need to be prevented or disincentivised from granting tax credits too many years ahead.

This leads to the question - what are the limits of LFTCs which can safely be issued? This paper does not provide answers, but merely observes that LFTCs should be regarded not as free money, but as a route back towards normal debt-free government financing. On the other hand, perhaps the climate emergency, the need to finance a Green New Deal and to adapt to increasing disruption, could be reasons to channel all available money towards the problem, in the expectation that money not spent now will simply lose value anyway as the global economy disintegrates.

Also, allowing wealthy people to pay their taxes far in advance at a favourable rate of interest would be socially undesirable, if it meant they were paying pennies for pounds of future-taxes.

In summary, LFTC issuance should be limited not on the basis of demand, but according to a comprehensive policy. These rules would need to be considerate of the fact that many LGs already owe many years of income to commercial lenders.

What are the implications for insolvency?

LFTCs are credits useful as money insofar as the creditors, namely the LGs, are

protected from insolvency. However those protections are far from clear and may not be guaranteed. The situation is not helped by newspaper using expressions like 'Bankruptcy Risk' and 'on the brink of financial failure'.⁷³

In the UK, the Public Works Loan Board, which lends to local authorities, states on its website that "Loans to local authorities are automatically secured by statute on the revenues of the authority"⁷⁴ - meaning that when central government lends to local authorities the loans are guaranteed by future tax receipts.

So it would be critical that LFTCs would have the same or similar ability to be secured against future tax receipts as the PWLB.

What should the withdrawal policy be?

Allowing taxpayers to withdraw their LFTCs would mean that money must be held on deposit (i.e. not spent) for that purpose. Each LG would have to decide how much to keep on deposit and what the withdrawal penalty would be. The policy should take into account extreme local events, such as a flood, which might cause large numbers of people to demand cash, regardless of the penalty.

LGs would not be expected to meet mass demands for cash in such an extreme event, but provision should be made in any case by insurance companies or other government loan funds, and could be coordinated en masse by the LG.

Could this be an international instrument?

Taxpayers would have an account with their local government, and with it, the ability to lend that institution money for mutual benefit. But what about non-taxpayers and foreign entities? One could imagine a US pension fund looking for a Sterling hedge and attempting to buy LFTC100m with their favourable interest rates. Would this be a problem?

LFTCs should be available first and foremost to taxpayers, since they constitute a relationship between the government and the governed. If LFTCs offered a favourable risk/reward ratio to global investors, their vast amounts of money could consume the limited supply of LFTCs, undercutting the taxpayers, but also extracting money (interest) out of the local economy and denying other opportunities for it to circulate (See section 3). If LGs wanted to lend to international institutions, then a conventional bonds would be a better instrument for that.

⁷³ See The Guardian 29 April 2017, above.

⁷⁴ UK Debt management Office (2019) "About the Public Works lending Board" Available at www.dmo.gov.uk/responsibilities/local-authority-lending-pwlb/about-pwlb

What are the taxation implications?

According to personal correspondence with the UK tax expert Richard Murphy, the time-based discount could be taxable as interest earned. Most UK subjects must receive more than GBP5000 in interest before tax is due on it. Therefore, only the wealthiest of taxpayers would be eligible for tax, and it would be similar to their tax calculations if they had money in the bank.

Is it a blockchain?

Each LG, as issuer of its own LFTCs and provider of payment services, would maintain its own ledger. It would be advisable for LGs to coordinate over design and implementation of the ledger/payments technologies in order to save costs.

An LG keeping a ledger for its tax payments is not an obvious use for a distributed ledger (DLT) because the LG is a singular organisation and an authority over its own ledger. It is already trusted by the taxpayers to keep the database honest. None of the anarcho-capitalist politics of Bitcoin applies.

However if LGs needed to keep a ledger between themselves, and they couldn't identify a responsible neutral party, a distributed ledger might be appropriate. In this case it would not be a permissionless ledger like Bitcoin, to which literally anybody could write, but a permissioned ledger which only those LGs could write to with ideally every LG maintaining a copy.

Note that permissioned DLTs are costly to build, and costly to modify compared to standard database technologies. However there is also a great deal of investment capital looking for distributed ledger projects, so there could be incentives for choosing less-than-optimal technologies.

In any case the decision to use distributed ledger software should be technical and operational, having almost no bearing on the LFTC instrument itself.

All the above notwithstanding, in 2018 the World Bank made headlines by issuing bonds on the Ethereum blockchain, and found it successful enough to repeat in 2019.⁷⁵

Blockchain technologies make transferring ownership of assets very easy, meaning that bonds could be used as a medium of exchange, similar to LFTCs. However talk of local governments issuing blockchain bonds has not yet led to action, even in USA where bonds are routinely used in local government finance.⁷⁶ In the UK, local governments are technically allowed to issue bonds, but the regulatory barriers mean that that other means of financing are always

75 World Bank (2019) "World Bank Issues Second Tranche of Blockchain Bond Via Bond-i" Available at www.worldbank.org/en/news/press-release/2019/08/16/world-bank-issues-second-tranche-of-blockchain-bond-via-bond-i

preferred.

Further research is needed on how the barriers to local government bond issuance can be lowered, and could blockchain be part of the solution?

Are LFTCs like Britain's Girobank?

The Girobank was created in 1968, to provide banking services to Britain's unbanked working class, and it went on to compete with banks in the cash deposit business. Later on it took started handling social security payments instead of commercial banks, and leading with technology, it forced commercial banks to innovate. As with LFTCs, Girobank offered current accounts which paid interest.⁷⁷

Are LFTCs like Central Bank Digital Currencies?

One monetary reform proposal gaining traction is the idea that citizens themselves should have accounts in the central bank. This would serve a number of purposes,⁷⁸ including giving the state more control over monetary policy (interest rates) and also allowing the state to be financed from citizens' savings. So the mechanism is very similar to LFTCs but differences are significant, both from a legal perspective, and also from the perspective of devolving power to local governments.

Are LFTCs like the proposed Italian 'Minibots'?

The Italian government caused controversy when it proposed to pay suppliers and tax rebates using paper bills issued for that purpose. It appears that those people and institutions invested in the Euro banks feared that this tiny measure of fiscal independence could be Italy's foot in the exit door of the Eurozone.⁷⁹

LFTCs and Minibots spring from the same view of money as government credit, but there are significant differences. The Minibots would be issued as paper bills and be used alongside cash, so like cash they would not bear interest. Nor were any plans mentioned for Minibots to interact with the banking system, being lent and borrowed at interest. They would be issued by the national government, rather than the local government. Finally local councils are unlikely to try to use LFTCs as a lever for secession.

76 Next City (2018) "Berkeley Is Turning to the Blockchain for City Funding" (March 15). Available at www.nextcity.org/daily/entry/berkeley-is-turning-to-the-blockchain-for-city-funding

77 The Guardian(2003) "Girobank brand laid to rest after 25 years" (July 7). Available at www.theguardian.com/money/2003/jul/07/business.postalservice

78 Bank of International Settlements (2018) "Central bank digital currencies" Available at <https://www.bis.org/cpmi/publ/d174.htm>

79 The American prospect (2019) "Dynamic Inclusive Money for a Dynamic Inclusive Economy" (October 17). Available at www.prospect.org/economy/dynamic-inclusive-money-economy

Are LFTCs like New York’s proposed ‘Inclusive Value Ledger’?

Cornell Professor Robert C Hockett recently proposed something similar to LFTCs for the state of New York.⁸⁰ The reasons given though were nothing to do with government financing, or savings, but more to do with payments.

The state has a practice of issuing tax rebates to pay citizens, say for community service or pension benefits, and for some of those rebates to be withdrawable. Doing all of this through the banking system creates delays and leads to some citizens being excluded. The IVL therefore allows citizen taxpayers to transfer these tax rebates directly to each other, which is to say, it is a payment system.

One crucial difference to the current LFTC proposal is that New York tax rebates do not yield interest, so the Inland Revenue Services (IRS) would not be involved. Also the amounts of money involved are much smaller - not enough to finance the government, probably not enough for businesses to settle with each other.

80 SSRN (2019) “The New York Inclusive Value Ledger: A Peer-to-Peer Savings & Payments Platform for an All-Embracing and Dynamic State Economy” Available at papers.ssrn.com/sol3/papers.cfm?abstract_id=3470923

Conclusion

This exploration has hopefully demonstrated how the more people's money is held in an institution or network of institutions, the more efficient payments between those people can be made, without moving the money – indeed the money need not even be present most of the time. It also shows how those institutions' 'promise' of money, in the form of a deposit account can be nearly as good, *or as good as* money itself. National governments guarantee bank deposits, even while those banks invest them in high risk assets for private profit.

National governments could just as easily guarantee deposits in institutions working for the benefit of society – like local governments – and the reason they don't appears to us to be purely ideological.

Our proposal for researching and trialing *Local Future Tax Credits* is, perhaps, somewhat tortuous attempt to find financial breathing space in a political system which is choking Local Governments at just the time when they need to invest urgently in the face of the climate emergency. Such ideas can buy time or ease pressure but are no substitute for political will. We hope that many more and far bolder proposals for policies will come forward over the coming months and years to help societies deeply adapt to the climate predicament.

For advice about deploying LFTCs or similar systems, contact Stephen de Meulenaere:

"At the Qoin Foundation we believe the LFTC concept has real potential for the rapid development and scaling of local currencies, and we are working with local governments to develop such systems."

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