

A PRODUCT THAT CAN SAVE A SYSTEM

Public Capitalization Notes

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We can't solve problems by using the same kind of thinking we used when we created them.

Albert Einstein

A PRODUCT THAT CAN SAVE A SYSTEM:

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Abstract

The world's major money printers are in trouble. The debt-based monetary architecture is going through serious stress. The recent banking and sovereign debt crises are systemic symptoms indicating an upcoming and unavoidable change in money creation methodology. This paper addresses the key structural challenges of the crisis and proposes a solution in the form of a new product/channel designed for money creation that does not require a commensurate debt or credit increase in the system. Public Capitalization Notes (PCNs) are profit sharing investment instruments issued or guaranteed by the government treasury and purchased with fresh money by the central bank. PCNs are equity-like instruments with space value for money. PCNs, while channelling funding to where it is most needed, they facilitate job creation, employment, income, deposits, and real activity. Public Capitalization Notes allow the existing system: 1) to survive through a bypass of its own mechanisms, and 2) to balance the inadequacies of a purely debt-based model.

Key Words: Money Creation, Public Debt, Credit, Public Capitalization Notes, Space Value of Money

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Introduction

The 2008 and 2011 financial crises are the two acts of the same play. Both crises have put the current monetary architecture face to face with a systemic bottleneck. The source of this bottleneck is an architectural issue. Indeed, the world's major money printers are in trouble.

After just a year or so from inventing trillions of dollars with their magic wands, Europe, the United States, and the United Kingdom cannot get their wands working again. Captive to a science of economics and its limitations, captive to a model of money creation that is grounded and founded on debt, captive to the banking industry's agenda and actions, the existing monetary architecture is facing a serious structural problem.

This paper proposes a solution to the crisis and the systemic blockages based on the creation and issuance of a new product designed for money creation, i.e., public capitalization notes.

The Debt Crises and Money Mechanics

Overextended and mismanaged credit and debt were an integral element of the 2008 banking crisis and the 2011 sovereign crisis. Along with debt, a plethora of regulatory and oversight issues and high level policy decisions, or their lack, played a major role in the unfolding events. From multibillion dollar Ponzi schemes to multibillion dollar losses, the 2008 crisis led governments to intervene quickly. Bailouts were orchestrated and quantitative easing was implemented to support the banks and the system further.

The 2008 crisis led to a significant jump in sovereign debt levels across the OECD landscape (Tables 1 and 2). From 2008 to 2010 the increases in deficits and aggregate debt have been phenomenal. Deficit as a percentage of GDP jumped from -4.8% to -10.8% in the UK in 2009. In Greece, it jumped from -9.8% to -15.6%. In France, the rate more than doubled from -3.3% to -7.5%. The minus sign here denotes a deficit. In terms of aggregate debt levels out of Nominal GDP, the rates speak clearly of a drastic increase. In France, public debt levels out of GDP jumped from 77.8% in 2008 to 94.1% in 2010, in the UK from 57% to 82.4%, and in the US, from 71% to 93.6%.

These increases were driven by the crisis, but increases in debt levels are a chronic feature of the current monetary architecture, and governments have been building up debt levels over the last many decades. Indeed debt is the driving mechanism of money creation and growth in our current model.

Table-1:

General government financial balances
Surplus (+) or deficit (-) as a per cent of nominal GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Ireland	4.8	1.0	-0.3	0.4	1.4	1.6	2.9	0.1	-7.3	-14.3	-32.4	-10.1	-8.2
United States	1.5	-0.6	-4.0	-5.0	-4.4	-3.3	-2.2	-2.9	-6.3	-11.3	-10.6	-10.1	-9.1
Greece	-3.7	-4.4	-4.8	-5.7	-7.4	-5.3	-6.0	-6.7	-9.8	-15.6	-10.4	-7.5	-6.5
United Kingdom	3.7	0.6	-2.0	-3.7	-3.6	-3.3	-2.7	-2.8	-4.8	-10.8	-10.3	-8.7	-7.1
Spain	-1.0	-0.7	-0.5	-0.2	-0.4	1.0	2.0	1.9	-4.2	-11.1	-9.2	-6.3	-4.4
Portugal	-2.9	-4.3	-2.9	-3.1	-3.4	-5.9	-4.1	-3.2	-3.6	-10.1	-9.2	-5.9	-4.5
Japan	-7.6	-6.3	-8.0	-7.9	-6.2	-6.7	-1.6	-2.4	-2.2	-8.7	-8.1	-8.9	-8.2
Iceland	1.7	-0.7	-2.6	-2.8	0.0	4.9	6.3	5.4	-13.5	-10.0	-7.8	-2.7	-1.4
France	-1.5	-1.6	-3.2	-4.1	-3.6	-3.0	-2.3	-2.7	-3.3	-7.5	-7.0	-5.6	-4.6
Australia	0.4	-0.5	0.7	1.3	1.0	1.2	1.3	1.4	-0.2	-4.9	-5.9	-2.8	-1.4
Slovenia	-3.7	-4.0	-2.5	-2.7	-2.3	-1.5	-1.4	-0.1	-1.8	-6.0	-5.6	-5.6	-4.1
Canada	2.9	0.7	-0.1	-0.1	0.9	1.5	1.6	1.4	0.0	-5.5	-5.5	-4.9	-3.5
Netherlands	2.0	-0.3	-2.1	-3.2	-1.8	-0.3	0.5	0.2	0.5	-5.5	-5.3	-3.7	-2.1
Austria	-1.9	-0.2	-0.9	-1.7	-4.6	-1.8	-1.7	-1.0	-1.0	-4.2	-4.6	-3.7	-3.2
Turkey	..	..	..	..	..	..	0.8	-1.2	-2.2	-6.7	-4.6	-3.3	-3.0
New Zealand	1.8	1.5	3.6	3.8	4.1	4.7	5.3	4.5	0.4	-2.6	-4.6	-8.5	-5.8
Italy	-0.9	-3.1	-3.0	-3.5	-3.6	-4.4	-3.3	-1.5	-2.7	-5.3	-4.5	-3.9	-2.6
Belgium	-0.1	0.4	-0.2	-0.2	-0.4	-2.8	0.1	-0.4	-1.3	-6.0	-4.2	-3.6	-2.8
Germany	1.3	-2.8	-3.6	-4.0	-3.8	-3.3	-1.6	0.3	0.1	-3.0	-3.3	-2.1	-1.2
Denmark	2.2	1.2	0.3	-0.1	1.9	5.0	5.0	4.8	3.3	-2.8	-2.9	-3.8	-3.0
Finland	6.8	5.0	4.0	2.3	2.1	2.5	3.9	5.2	4.2	-2.9	-2.8	-1.4	-0.6
Luxembourg	6.0	6.1	2.1	0.5	-1.1	0.0	1.4	3.7	3.0	-0.9	-1.7	-0.9	0.0
Sweden	3.6	1.6	-1.5	-1.3	0.4	1.9	2.2	3.6	2.2	-0.9	-0.3	0.3	1.4
Korea	5.4	4.3	5.1	0.5	2.7	3.4	3.9	4.7	3.0	-1.1	0.0	0.5	1.3
Switzerland	0.1	-0.1	-1.2	-1.7	-1.8	-0.7	0.8	1.7	2.3	1.2	0.5	0.6	0.9
Norway	15.4	13.3	9.2	7.3	11.1	15.1	18.4	17.5	19.1	10.5	10.5	12.5	11.9

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Table-2:

General government gross financial liabilities
Per cent of nominal GDP

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Japan ³	135.4	143.7	152.3	158.0	165.5	175.3	172.1	167.0	174.1	194.1	199.7	212.7	218.7
Greece	115.3	118.1	117.6	112.3	114.8	121.2	115.6	112.9	116.1	131.6	147.3	157.1	159.3
Italy	121.6	120.8	119.4	116.8	117.3	120.0	117.4	112.8	115.2	127.8	126.8	129.0	128.4
Iceland	72.9	75.0	72.0	71.0	64.5	52.6	57.4	53.3	102.0	120.0	120.2	121.0	120.2
Portugal	60.2	61.7	65.0	66.8	69.3	72.8	77.6	75.4	80.6	93.1	103.1	110.8	115.8
Ireland	39.4	36.9	35.2	34.1	32.8	32.6	28.8	28.8	49.6	71.6	102.4	120.4	125.6
Belgium ¹	113.7	112.0	108.4	103.5	98.5	95.9	91.7	88.1	93.3	100.5	100.7	100.7	100.4
France	65.6	64.3	67.3	71.4	73.9	75.7	70.9	72.3	77.8	89.2	94.1	97.3	100.0
United States	54.5	54.4	56.8	60.2	61.2	61.4	60.8	62.0	71.0	84.3	93.6	101.1	107.0
Germany ²	60.4	59.8	62.2	65.4	68.8	71.2	69.3	65.3	69.3	76.4	87.0	87.3	86.9
Canada	82.1	82.7	80.6	76.6	72.6	71.6	70.3	66.5	71.3	83.4	84.2	85.9	88.0
United Kingdom	45.1	40.4	40.8	41.5	43.8	46.4	46.1	47.2	57.0	72.4	82.4	88.5	93.3
Austria	71.1	72.1	73.0	71.2	70.8	70.9	66.6	63.1	67.3	72.6	78.6	80.0	81.6
Netherlands	63.9	59.4	60.3	61.4	61.9	60.7	54.5	51.5	64.5	67.6	71.4	74.3	75.2
Spain	66.5	61.9	60.3	55.3	53.4	50.4	45.9	42.1	47.4	62.3	66.1	73.6	74.8
Poland	45.4	43.7	55.0	55.3	54.8	54.7	55.2	51.7	54.5	58.4	62.4	65.6	66.3
Finland	52.5	50.0	49.6	51.5	51.5	48.4	45.5	41.4	40.6	52.1	57.4	62.7	66.1
Denmark	60.4	58.4	58.2	56.6	54.0	45.9	41.2	34.3	42.6	52.4	55.5	57.1	60.0
Norway	32.7	31.6	38.8	48.2	51.0	47.9	59.4	57.4	54.9	48.0	49.5	56.1	51.2
Sweden	64.3	62.7	60.2	59.3	60.0	60.8	53.9	49.3	49.6	52.0	49.1	45.4	41.1
Slovenia	..	33.7	34.8	34.2	35.0	33.9	33.8	30.0	29.7	44.2	47.5	52.9	56.5
Switzerland	52.4	51.2	57.2	57.0	57.9	56.4	50.2	46.8	43.7	41.5	40.2	38.7	37.0
New Zealand	36.9	34.9	33.0	30.9	28.2	26.9	26.6	25.7	28.9	34.5	38.7	45.8	52.0
Korea ⁴	..	..	19.2	19.3	22.6	24.6	27.7	27.9	29.6	32.5	33.9	33.3	33.4
Australia	24.6	21.8	19.8	18.3	16.5	16.1	15.3	14.2	13.6	19.4	25.3	29.3	30.9
Luxembourg	9.2	8.2	8.4	7.9	8.6	7.6	12.1	11.7	16.4	14.7	19.7	20.5	23.9

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Money is backed by government debt (Table-3). The Central Banks print the banknotes and balance the entry in their liabilities with assets that are mainly government bonds. Money is created by debt and then grows through credit. Credit, through the fractional banking system, creates new money. This is achieved by creating new deposits based on debt agreements and contracts that banks sign with their clients. Thus, at the creation level and at the expansion level, money is driven

by debt and credit. Growth implies being bigger or larger or more active than previously. From a monetary perspective, in our current model, growth in money supply implies growth in debt or credit somewhere in the system (Figures 1 and 2).

Table-3: Selected components of the Federal Reserve balance sheet, 2009-2011

Source: Federal Reserve

Balance sheet item	Dec. 30, 2009	July 7, 2010	Feb. 23, 2011
Total assets	2,237,258	2,335,457	2,537,175
Selected assets			
<i>Credit extended to depository institutions and dealers</i>			
Primary credit	19,111	17	24
Term auction credit	75,918	0	0
Primary Dealer Credit Facility and other broker-dealer credit	0	...	...
Central bank liquidity swaps	10,272	1,245	70
<i>Credit extended to other market participants</i>			
Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility	0	...	...
Net portfolio holdings of Commercial Paper Funding Facility LLC	14,072	1	...
Term Asset-Backed Securities Loan Facility	47,532	42,278	20,997
<i>Support of critical institutions</i>			
Net portfolio holdings of Maiden Lane LLC, Maiden Lane II LLC, and Maiden Lane III LLC ¹	65,024	66,996	64,902
Credit extended to American International Group, Inc.	22,033	24,560	...
Preferred interests in AIA Aurora LLC and ALICO Holdings LLC	25,000	25,733	...
<i>Securities held outright</i>			
U.S. Treasury securities	776,587	776,997	1,213,425
Agency debt securities	159,879	164,762	144,119
Agency mortgage-backed securities (MBS) ²	908,257	1,118,290	958,201
Memo			
Term Securities Lending Facility ³	0	...	...
Total liabilities	2,185,139	2,278,523	2,484,141
Selected liabilities			
Federal Reserve notes in circulation	889,678	907,698	956,012
Reverse repurchase agreements	70,450	62,904	59,484
Deposits held by depository institutions	1,025,271	1,061,239	1,297,905
Of which: Term deposits	...	2,122	5,070
U.S. Treasury, general account	149,819	16,475	23,123
U.S. Treasury, Supplementary Financing Account	5,001	199,963	124,976
Total capital	52,119	56,934	53,035

The nature of the paperwork and or electronic communication that happens between the central bank and the government, i.e., the real and accounting exchange of banknotes for government bonds, is the key structural issue that must be addressed. Indeed, as it is discussed and proposed here, this equation must be transformed to allow governments to inject new money without additional debt. This is the systemic bottleneck that we are living today.

Figure-1: Money Creation and Expansion

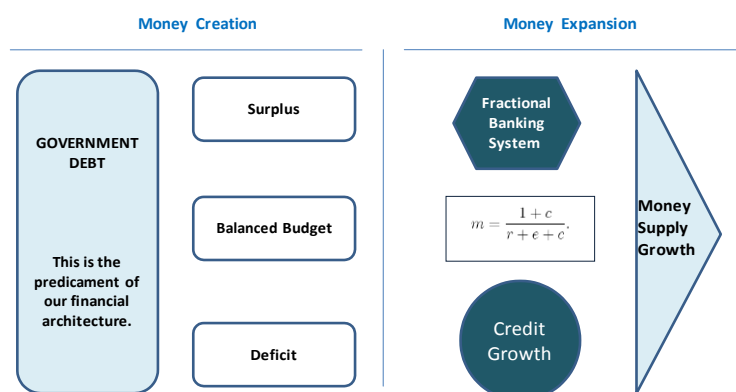
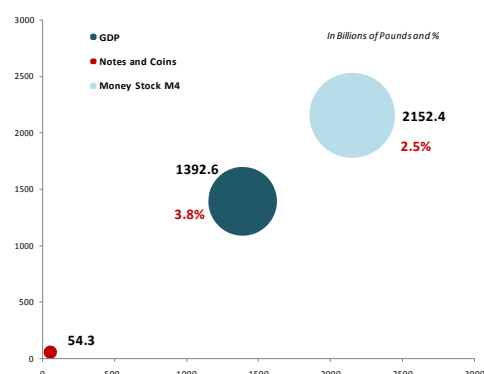


Figure-2: Notes, GDP and Money Stock

Source: Bank of England



When governments change their policy from quantitative easing and bailouts to austerity measures, they reveal a very worrying confusion regarding the source of money. Why was money so easily creatable when the banks were failing not long ago, and why is it so hard now?

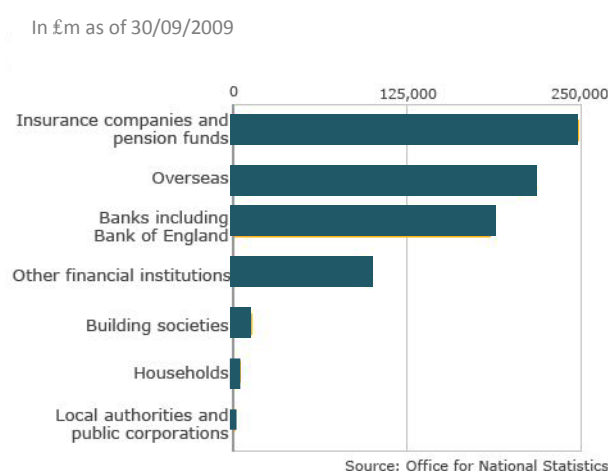
The causes are systemic. Having just printed billions of debt and money, governments are now being threatened with market access and higher cost of capital for their bonds. Governments are being required to tighten budgets, reduce deficits, and cut debt in the middle of a fragile economic recovery, if the claw back can be described as a recovery. With high unemployment rates, hardly impressive real GDP figures (Table-4), and a series of social issues, governments are in the process of buying into market pressure.

Table-4: Real GDP
Percentage change from previous year

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Greece	4.5	4.2	3.4	5.9	4.4	2.3	5.2	4.3	1.0	-2.0	-4.5	-2.9	0.6
Iceland	4.3	3.9	0.1	2.4	7.7	7.5	4.6	6.0	1.4	-6.9	-3.5	2.2	2.9
Ireland	9.7	5.7	6.6	4.4	4.6	6.0	5.3	5.6	-3.6	-7.6	-1.0	0.0	2.3
Spain	5.0	3.6	2.7	3.1	3.3	3.6	4.0	3.6	0.9	-3.7	-0.1	0.9	1.6
Norway	3.3	2.0	1.5	1.0	3.9	2.7	2.3	2.7	0.8	-1.4	0.4	2.5	3.0
Slovenia	4.4	2.8	4.0	2.8	4.3	4.5	5.9	6.9	3.7	-8.1	1.2	1.8	2.6
United Kingdom	3.9	2.5	2.1	2.8	3.0	2.2	2.8	2.7	-0.1	-4.9	1.3	1.4	1.8
Portugal	3.9	2.0	0.7	-0.9	1.6	0.8	1.4	2.4	0.0	-2.5	1.3	-2.1	-1.5
France	4.1	1.8	1.1	1.1	2.3	2.0	2.4	2.3	0.1	-2.7	1.4	2.2	2.1
Netherlands	3.9	1.9	0.1	0.3	2.2	2.0	3.4	3.9	1.9	-3.9	1.8	2.3	1.9
Denmark	3.5	0.7	0.5	0.4	2.3	2.4	3.4	1.6	-1.1	-5.2	2.1	1.9	2.1
Belgium	3.8	0.7	1.4	0.8	3.1	2.0	2.7	2.8	0.8	-2.7	2.1	2.4	2.0
Austria	3.3	0.5	1.6	0.7	2.6	2.8	3.5	3.7	2.2	-3.9	2.1	2.9	2.1
New Zealand	3.7	2.5	4.6	4.4	4.1	3.2	2.0	3.4	-0.7	0.0	2.5	0.8	4.1
Switzerland	3.6	1.2	0.4	-0.2	2.5	2.6	3.6	3.6	1.9	-1.9	2.6	2.7	2.5
Australia	3.4	2.7	3.9	3.6	3.3	3.4	2.5	4.7	2.4	1.4	2.6	2.9	4.5
United States	4.1	1.1	1.8	2.5	3.6	3.1	2.7	1.9	0.0	-2.6	2.9	2.6	3.1
Finland	5.3	2.2	1.7	2.1	4.1	3.0	4.4	5.3	1.0	-8.3	3.1	3.8	2.8
Canada	5.2	1.8	2.9	1.9	3.1	3.0	2.8	2.2	0.5	-2.5	3.1	3.0	2.8
Estonia	10.0	7.5	7.9	7.6	7.2	9.4	10.6	6.9	-5.1	-13.9	3.1	5.9	4.7
Germany	3.5	1.4	0.0	-0.2	0.7	0.9	3.6	2.8	0.7	-4.7	3.5	3.4	2.5
Luxembourg	8.4	2.5	4.1	1.5	4.4	5.4	5.0	6.6	1.4	-3.6	3.5	3.2	3.9
Japan	2.9	0.2	0.3	1.4	2.7	1.9	2.0	2.4	-1.2	-6.3	4.0	-0.9	2.2
Chile	4.6	3.4	2.1	3.7	5.9	5.6	4.9	4.9	3.2	-1.5	5.1	6.5	5.1
Sweden	4.6	1.4	2.5	2.5	3.7	3.1	4.6	3.4	-0.8	-5.3	5.3	4.5	3.1
Mexico	6.0	-0.9	0.1	1.4	4.0	3.2	5.2	3.2	1.5	-6.1	5.5	4.4	3.8
Korea	8.8	4.0	7.2	2.8	4.6	4.0	5.2	5.1	2.3	0.3	6.2	4.6	4.5
Turkey	6.8	-5.7	6.2	5.3	9.4	8.4	6.9	4.7	0.7	-4.8	8.9	6.5	5.3

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Figure-3: Who owns UK government Gilts

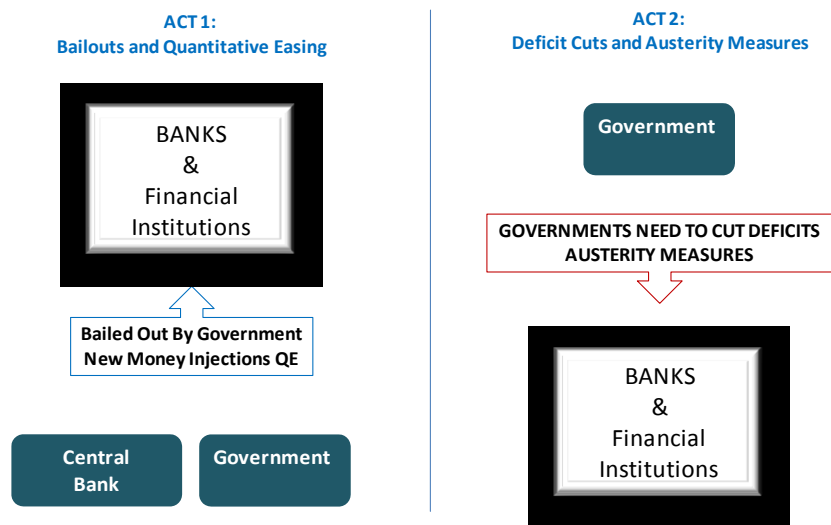


Given that a large chunk of government debt is owned by banks and other financial institutions (Figure-3), the market is trading government bonds and keeping governments hostage to its investment criteria. By choosing to hold a government bond, or not, banks and financial institutions influence the policies of governments when it comes to deficit financing and borrowing costs. Credit Default Swaps and buy-side demand are powerful tools that keep governments on their toes when it comes to capital market access.

Figure-4: Act 1 and 2 of the Crisis: Yielding to Banks

The paradoxical sequencing of bailouts, quantitative easing and austerity measures reveals how governments ended up doing what the banks wanted and needed in both stages of the crisis. In the first act banks were too big to fail and had to be rescued, except Lehman Brothers for some reason, in the second act, they needed to be convinced

to hold government debt with tighter budgets and deficit reduction plans, because cutting deficits is the sustainable approach in the current model of debt-based money creation.



As such, deficit reduction is the appropriate target for policy makers in the current model. The issue, however, is the state of the economy and the levels of projected activity. How can we cut debt and deficits when the economy is still struggling out of a recent crisis, unemployment is high, and growth is at risk? The timing of the austerity measures is due to the fact that the 2008 crisis already pushed public debt levels much higher, breaching 100% of nominal GDP for many OECD countries.

A serious problem arises when the economy needs more money to get out of a recession, but government debt levels are already high enough and the market is concerned with sovereign defaults. Central banks can always purchase existing government bonds from the banks, as done through quantitative easing, but the new injection must become credit to have any real impact on economic activity. This has been proven to be helpful to save the banks, but not to stimulate growth in already overleveraged economies.

This paradoxical situation has its solution in the monetary architecture behind money creation. We need to reform the existing central bank/government debt-based relationship by adding a parallel channel of money creation and injection, through Public Capitalization Notes (PCNs). PCNs will allow the injection of fresh money into the system without adding government debt, and will simultaneously support income, deposits, new investment, and real activity, while creating jobs and opportunities.

The breakthroughs that human science and imagination have achieved in technology and telecommunications have been thanks to a fundamental open attitude towards invention and mastering new ways of doing things better. In Economics, we need to approach the debt-based system with similar openness to identify the structural innovations required to address the current bottleneck.

Money Mechanics and Public Capitalization Notes

When human institutional organization is the ultimate source of money, why is it that the securities used by central banks to back currency issuance are debt instruments? while they could, in principle, be anything we find appropriate. Indeed, it is quite absurd to witness a money inventor inventing a system that enslaves itself to debt. The inventor must invent a system based on a principle of wealth, which happens to serve the inventor's original purpose far better.

The solution we need right now, to be real and effective, must have a positive and immediate impact on employment, investment, income, and deposits, and finally, must not increase the debt exposure of governments.

I believe that the solution rests in designing and issuing a new financial instrument, which I call Public Capitalization Note, and using it for monetization purposes. Public Capitalization Notes are designed as profit sharing instruments attached to real economic projects in different industries, whereby the Central Bank and the Government jointly undertake an investment in the very fabric of society. Using such an instrument for monetization implies that the government treasury issues Public Capitalization Notes (PCNs) and the Central Bank Purchases them directly with fresh money.

The monetary and real impact of such an instrument used for money creation would be very direct and strong on income, expenditure, employment, bank deposits, capital formation, and real productive activity.

Using PCNs for monetization purposes is equivalent to adding a money creation channel that allows the injection of money into the system without any debt. PCNs introduce equity-like monetization. Equity-like refers to the nature of rights and obligations exchanged between the central bank and the government, and not to public or private shares or stocks of any kind. PCNs introduce the logic of investment and ownership as they are profit sharing instruments and are aimed at building and improving the socioeconomic structures of society.



Indeed, equity-like monetization could be a key concept that can help governments deal with high levels of public debt, like in the US, Japan, Europe, the UK and elsewhere in the world. Indeed, the use of Public Capitalization Notes between the treasury and the central bank is equivalent to a symbiotic merger of monetary and fiscal policy. Adding a new channel of money creation and injection to the current debt-based system would allow the states in crisis to inject new money without adding more debt to their exposure.

Equity-like monetization allows human societies to print and manage their monies (which they already do) in a logic of existence and ownership, rather than a logic of survival and debt. Given that we are creating money through an institutional arrangement between governments and



central banks, optimizing the nature and basis of money creation would exponentially multiply what we can achieve in terms of prosperity.

Equity-like monetization is a viable solution and is also compatible with the principles of Islamic finance. The nature of authentic Islamic finance lends itself to such a transformation. Indeed, the financial engineering principles behind Public Capitalization Notes are principles commonly used in Islamic Finance, i.e., risk sharing, profit potential, no interest, real assets and real activity.

Moreover, PCNs have no more impact on inflation than standard bonds. Inflation relates to the quantity of money injected, not the method of money injection. Indeed, if there is to be a QE3, for it to have a direct impact, it must be done via Public Capitalization Notes. At this point, it really does not matter if banks have more money or not. QE3 must have a direct impact on aggregate income to ensure the fragile recovery does not end up as another unprecedented recession. QE3 must be spent in the economy to become immediate income.

Interestingly, the Bank of England Issue Department does actually implement a mechanism that allows it to back its banknotes with what it calls a "Deposit with Banking Department" on its asset side of the balance sheet. Indeed, in 2010, the Issue Department and the Banking Department of the Bank of England were inventing more than 50% of the British Pounds in circulation through an internal deposit (Table-5).

Table-5: Bank of England Issue Department Balance Sheet 2010

Assets (£m)		Liabilities (£m)	
Securities of, or guaranteed by, British Government	5,679	Notes issued	50,220
Other Assets, Including those acquired under reverse repurchase agreements	44,541		
<i>Deposit with Banking Department</i>	26,655		
<i>Reverse repurchase agreements</i>	17,886		
Total Assets	50,220	Total Liabilities	50,220

If money can be backed by a deposit in the other branch of the same bank (BOE), then it sure can be backed by Public Capitalization Notes that have a direct impact on the economy. The struggling advanced economies need a systemic breakthrough in order to transform the current equation once and for all. This is particularly urgent given the paradoxical sequencing of bailouts, quantitative easing, and austerity measures. We cannot possibly think that we are going to achieve more growth with less money.

Instead of backing money with Public Debt, which is untenable without ever increasing debt levels, we could also back it with Public Investments, i.e., wealth. Public Capitalization Notes can do the job just fine.

Public Capitalization Notes: Structure and Impact

If the existing money creation equation were to be transformed to include non-debt injections through Public Capitalization Notes, governments will not be in such a crisis to cut deficits and adopt austerity measures. This is so because they would have the option to inject money via debt or investment. If they cannot afford more debt, then the right choice would be to inject new money via investment instruments such as PCNs.

The name and actual legal structure of the proposed instrument here can be debated and altered as necessary in different jurisdictions and by different governments. Moreover, many changes and additions, variations and complexities can be introduced into such instruments. I do not intend to turn this paper into a financial engineering exercise, and I leave term sheets for a later opportunity. Instead, I describe the key features that such notes must have, and how they could be introduced.

Figure-5: Public Capitalization Notes

Public Capitalization Notes are profit sharing instruments that are issued by the government treasury or guaranteed by the treasury and aim at funding a public investment in a specific industry (Figure-5). A real project hiring real people and real assets and creating new opportunities. Through PCNs, central banks and governments will earn a return when the underlying project earns a return.



All sectors of the economy that need a boost to overcome the debt-lock can be supported with real spending, subject to a project management entity being created to administer and manage the funds and bring the projects to execution.

Public Capitalization Notes (PCNs) will have to be issued by the government treasury, and offered for sale to the country's Central Bank. In other words, unlike government bonds which are bought and traded by commercial banks and other financial institutions, PCNs will be available for purchase only for the Central Bank. Naturally, they will have to be in domestic currency, the currency printed and managed by the central bank.

PCNs can be used in parallel to government bonds. The key issue is to allow money injection into the system without additional government debt. This does not mean that all existing government bonds have to be replaced with PCNs. Indeed, existing bonds and new ones could still be issued by governments. For countries who have amassed huge amounts of public debt, this could be an appropriate mechanism to stop or slow down debt accumulation.

A PCN execution platform can coexist with the existing government bond market. Indeed, the structural work involved only complements the debt based system, does not replace it (Table-6).

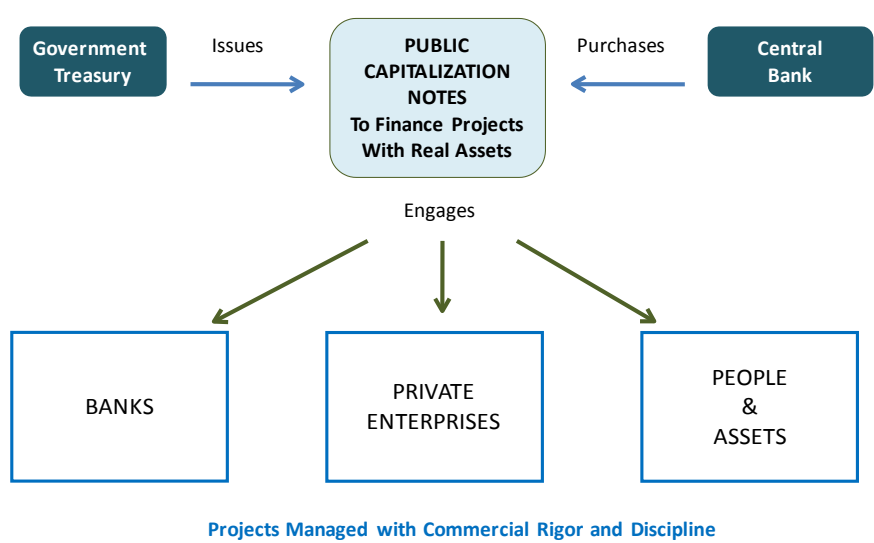
Table-6: Government Bonds and Public Capitalization Notes

PUBLIC CAPITALIZATION NOTES	Can Coexist	GOVERNMENT BONDS
<ul style="list-style-type: none"> • PCN Execution Platform • Public Private Partnerships • Regulatory Oversight • Project Planning 		<ul style="list-style-type: none"> • “Risk Free Rate” • Yield Curve • Fixed Income Investment • Reference

PCNs allow direct and immediate impact on real activity without more debt.
Over time PCNs could replace a significant % of Government Bonds.

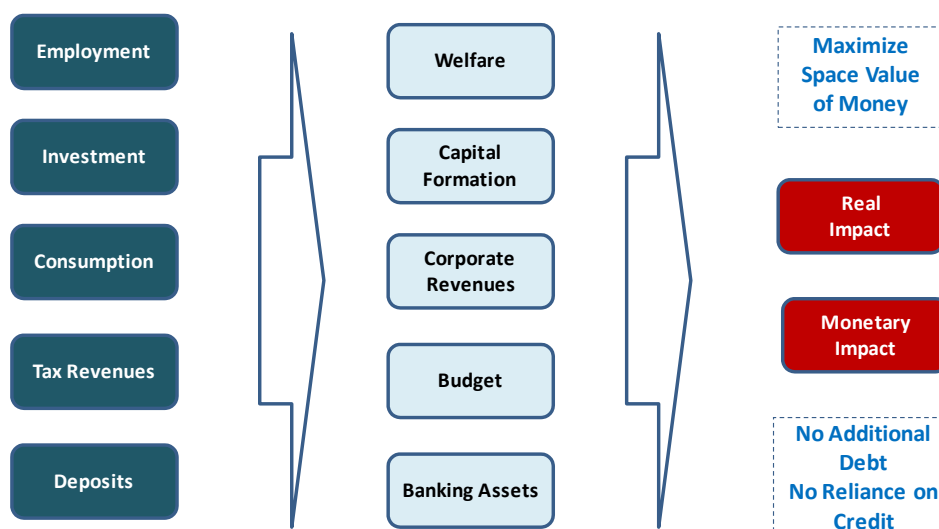
Public Capitalization Notes as described in Figure-6 have a direct impact on private and corporate income because the execution of the project will inject new money into households, businesses, industries and banks. The government agency that is responsible of the project management of PCN generated funds, must subcontract the business to private enterprise while ensuring job creation and employment generation are achieved.

Figure-6: Public Capitalization Notes: Project Execution



Public Capitalization Notes allow the government and the central bank to fund and execute new projects in real industries with fresh new money. By doing so, the new money injection has a direct impact on employment, investment, consumption, tax revenues, and deposits. In turn, they allow improvements in welfare expenditure, capital formation, corporate revenues, budgets, and banking assets (Figure-7).

Figure-7: Impact of PCNs



The impact of PCNs is both monetary and real as the injected money is being introduced as income first. By the fact that PCNs involve direct expenditure, they engage real assets and people early on. PCNs can be a channel of money injection that ensures an immediate space value to the injected monetary stimulus without adding debt.

Many economists and industry experts might wonder about the inflationary impact of PCNs. It must be stated that such pressures could result if excessive injections are undertaken. However, this is also the case with bonds. Thus, the change in the method of injection should not by itself be an additional concern. It should be noted however that PCNs will have a faster and more direct impact on income and thus consumption and investment. As such, the price impact of a PCN driven money injection could have a much shorter time lag.

When used for monetization purposes PCNs allow and lead to a fundamental reform in modern money mechanics while simultaneously addressing the paradox of 'Public Debt.' Indeed, by stimulating the economy without additional debt, PCNs generate the activity levels and tax revenues required to pay down public debt levels.

PCNs and Space Value of Money

Across the theory and practice of finance and financial valuation, the two most important principles used to value instruments and investments are *Time Value of Money* and *Risk and Return*. This is a textbook fact, and is also true about theoretical and applied financial valuation models. I have elsewhere proposed the concept of *Space Value of Money* as the missing yardstick. This concept is relevant because it is one of the principles upon which Public Capitalization Notes are structured.

An investment project of whatever nature has space value of money when it has an impact on the physical space and its inhabitants. Such a project or instrument achieves its earnings by using, alongside time and capital, real people and real assets. The real activity involved gives the project or instrument a community impact that would otherwise be absent if the earned return was to be interest on time and capital alone. Space value of money is the aggregate real asset impact of a project or instrument.

Space value of money does not replace the principle of time value of money. It comes to compliment its basic proposition of time value with space value. Indeed, time-space is a more complete representation of our reality than time alone. Moreover, taking into account time and space parameters is bound to make us more relevant to our current moment.

The space value of money impact of a project can be derived via a detailed scrutiny of a number of factors. The real assets used in an investment, the nature of the assets, and the type of engagement used for their utilization are crucial variables that determine the eventual space impact of a project.

Space Value of Money is a crucial valuation principle especially for governments. While individual and private investors may be indifferent to the space impact of their investments as long as the discounted time value and percentage return is appropriate to their assessment of risk, whatever the nature of the risks. Governments, on the other hand, as public servants, have the responsibility to ensure their investments have an impact on people and activity from micro and macro perspectives.

A conventional bond can also finance real projects. In other words, the above discussion does not ignore the fact that bonds could also have a space value indirectly through the projects and types of spending they finance. There is a distinction, however, as bonds may also be used to finance other bonds, and other non-physical investments.

An instrument that has space value of money is *embedded* in the real economy by design. Public Capitalization Notes have space value for money because they engage people, businesses, and banks to administer and execute public projects financed directly by the Central Bank.

Interestingly, the principle of banning interest within Islamic finance is based on the idea of having more than just time and capital in the cooking pot, i.e., involve real people and real activity.

Conclusion

Money is the result of an institutional arrangement derived through a specific relationship between the two major arms of the state, i.e., the central bank and the government. Given that the state is the ultimate source of money, and therefore by extrapolation the ultimate source of credit, it is interesting to observe the system chasing its own tale.

To date the equation through which money is created and injected into an economy is a debt-based equation. I suggest in this paper that indeed, this relationship could be complemented with an equity-like dimension.

Equity-like is defined not in terms of share ownership, but rather in terms of the nature of cash-flows and commitments that are exchanged between the government and the central bank. The new equation would allow central banks to capitalize governments rather than lend to governments. Naturally, this change boils down to a change in the instruments used to back local currency issuance, which are also used to inject new money in an economy.

I propose the basic features of an instrument that could be used for such a purpose: Public Capitalization Notes. PCNs are project -based and profit-sharing instruments that have to be issued by treasuries, and offered for sale to central banks. They could be used in parallel to government bonds. They could be of different maturities, including perpetuity. They would be structured as divided paying notes where payment is not based on a predetermined fixed interest rate, but a discretionary dividend paid when real projects earn a return. This is very important in order to ensure that the new instruments are not debt or debt-like instruments – thus transforming the underlying equation behind money creation.

Public Capitalization Notes when used to inject new money into the economy open the door to a whole new chapter in value and money creation. States could indeed print what they need to print, but based on a principle of investment rather than debt. We can, should, and deserve to imagine a wealth-based system.

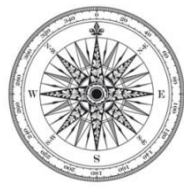
Economic imagination, like sociological imagination, determines the reality we create for ourselves.

Data Sources

US Federal Reserve, Bank of England, OECD, UK Office of National Statistics.

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