ABSTRACT

This paper provides an overview and discussion of several important approaches to the governance of monetary systems in the light of the extent to which all stakeholders have full input into monetary decision-making processes. Currency scale and various approaches to monetary governance are explored, identifying a number of key limitations with previous approaches and highlighting the need for a modified conceptual and theoretical framework for exploring the potential of small scale currency institutions to allow greater participatory monetary decision-making.

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* Email: destinie_jones@yahoo.com

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INTRODUCTION

Governance of money is important for two reasons. First, Fung and Olin-Wright (2003) show how centralisation of governance affects stakeholder input into institutional decision-making. Second, Polanyi (1957) has shown how monetary governance affects and is affected by the number of functions fulfilled by a currency.

This paper explores three major influences on popular access to monetary institutional decision-making. Their motivations are:

- First, Regulatory Frameworks (RFs) external to a given currency institution (mainly national but increasingly supra-national regulations),
- Second, decision-making processes internal to the currency institution,
- Third, the scale of the currency, here defined by the number of monetary functions filled by the currency in conjunction with its geographical range of circulation.

These three influences affect the governance of any currency. The first two form the decision-making processes which are moderated by the third, defined later, in terms of functional-geographical scale. First, key definitions surrounding money and its governance are explored. The paper then explores how the relevant literature approaches the three influences mentioned above. Later sections discuss relevant external influences on currency institutional governance, specifically US national RFs, followed by internal decision-making processes, focusing on transparency, accountability and user participation in currency decision-making (through seigniorage, issuance and backing of money). Finally, the paper examines the impact of scale on the governance of a given currency.

UNDERSTANDING MONEY, CURRENCIES AND MONETARY GOVERNANCE

Studies of non-national currencies have investigated them either as functional tools for local economic development or as attempts at resisting globalisation. Mercedes Gomez (2006), Mascornick (2007), Aldridge and Patterson (2002), and Collom (2005) explore currency functions in the context of how geographical circulation limits could strengthen local business networks. In contrast to these primarily business oriented studies, Cascio (2005), Grover (2006) and Batchelor (2003) primarily focus on local economic outcomes in communities while Seyfang (2001) modifies local economic development concerns by adding a sustainability perspective. Williams (2005) on the other hand sees local currencies as potential ‘bridges into work’ but largely neglects governance and sustainability. In contrast to these functional perspectives, North (1998) discusses divisions within currency institutions from a social movement perspective, while Pacione (1999) explores currencies as anti-globalization tools. Non-national currencies may offer greater participatory decision-making for stakeholders, but there are no metrics to verify this as, for example, Bini (2008) and Cukierman (1992) have done in measuring levels of central bank independence. Though the functional and geographical impact of money dominates the discussion of monetary governance, decision-making processes remain understudied, lacking metrics for levels of currency user input against functional-geographical scale.

Understanding Money and Currencies

In keeping with traditional usage based definitions of money, (see for example Hume 1777) Polanyi (1977) listed accepted functions of money, which include:

- providing a standard of value or unit of account (UoA),
- acting as a medium of exchange (MoE),
- allowing the long term storage of value (SoV)

Any currency must function as a unit of account to track exchanges and equivalencies. Dalziel (2000) offers the standard definition of a medium of exchange as anything generally accepted in payment for transactions. Mafi-Kreft (2003) likewise concurs with other economists in defining store of value as purchasing power, measured by inflation. Popp (1970) agrees that purchasing power is critical to storing value, but stresses the importance of distinguishing between currency as a medium of exchange versus as a means of payment. He differentiates exchange media from payment media, defining a means of payment as that which governments or local authorities accept in payment of taxes, fines and fees. This distinction will become important in future related papers on shared monetary governance.

Polanyi (1977) also asserts that there are two distinct categories of money based on the number of functions that currency fulfills:

- General Purpose money, and
- Special Purpose Currencies

Historically, according to Polanyi, different currencies were used for different purposes. General Purpose money refers to currency used to fulfill all the three aforementioned functions simultaneously, i.e. as a Unit of Account (UoA), Medium of Exchange (MoE), and Store of Value (SoV). By Polanyi’s definition, currencies which do not perform all three of these functions are Special Purpose Currencies (SPCs) making complementary currencies (meant to exist alongside rather than displace national money) SPCs.

While criticizing the function-based definitions of money used by Polanyi and others, Codere (1968) agrees on the importance of distinguishing between the monetary functions of accounting, exchange and storage of value. By placing a numerical value on goods and services, prices allow money to be used as a UoA. Money functions as a MoE when it is accepted in payment for goods or services.
Money thereby eliminates barter’s double coincidence of needs, in which each party must have something the other party wants. Finally, money also provides a vehicle for SoV when purchasing power, which Kocherlakota (1996) defines as the ability of a given amount of money to purchase the same goods and services, remains stable over time.

Carruthers (2005) agrees on this functional nature of money, but adds that it is socially constructed and based on trust. In fact there are sociological and anthropological approaches that define money less by function and more by stakeholder influence. Indeed, Hart (2001) and Kocherlakota (1996) view money as a socially constructed form of memory. Such social construction implies a need for transparency, but for Buchanan (1997) paradoxically, social desire gives money its value through inherently non-transparent processes. The impact of such processes on stakeholders emphatically redoubles the need for transparency. Simmel (1978) agrees that these changes in the value of money affect stakeholder interests, implying a need for accountability due to the changed value of the acquired money. While Dodd (1994) counters that Simmel is describing a subjective value of money, he acknowledges the need for objective social accountability by adding ‘means of speculation’ to the list of functions of general purpose money. Zelizer (1997) likewise holds money accountable to society, asserting that earmarking money for specific purposes can change the subjective value of that money. Such social rather than functional approaches to money seem to manifest stakeholder desire to interact more personally with monetary decision-making processes. Furthermore, Rowbotham (1998) and Zarlenza (2002) cite Marx (1867), Del Mar (1895) and Keynes (1930) in asserting that legal tender status, socially rather than functionally enacted, actually defines money, of which currency is a subset.

This review defines currency as any transferable or spendable medium (whether as physical notes or credit-based) which is accepted by third parties for goods or services. This definition assumes that currencies are part of complex social institutions (not simply economic ones) vested with meaning which is directly related to the functions that currencies are called to perform. Furthermore, their governance both constructs and is affected by the interests of all stakeholders. It is to the later that our focus now turns. While the terms money and currency are used interchangeably here, the emphasis is on currencies issued by national, local or community based institutions rather than money, which includes financial instruments such as securities, bonds, etc. with broader considerations than simply currency.

Relating Monetary Governance to Currency Institutions and Stakeholder Access

With regard to the wider use of the term, general definitions of governance are still evolving. There is thus far no formally agreed upon definition, as the term entails both normative and analytical aspects depending upon the perspective within which it is discussed. Broadly speaking, Jessop (1995) and Stoker (1998) summarise the consensus that governance is a complex and integrated combination of state regulatory mechanisms, markets and civil society or ‘third sector’ actors. Jessop asserts that in order to understand internal institutional governance processes, one must take into account external regulatory frameworks under which these institutions operate. Specifically, Papadopoulos and Carmel (2003) emphasise the influence of state regulatory frameworks governing institutions by regulating what is governed, how and by whom. Stoker’s (1998) inclusion of autonomous self-government in his governance framework suggests that investigation of monetary governance must examine both external oversight and internal currency institutional processes. Thus the term governance is used in this paper to describe the complex socio-political process by which a domain or activity of social, political or economic life is shaped. That is, how actors and stakeholders interact in creating, reproducing or changing a given institution under relevant state regulation which define acceptable decision-making activities and functions.

In the literature, monetary governance is often used interchangeably with the term monetary policy to refer to interest rate policy set by central banks. Broader discussions of monetary governance tend to focus on function, with few authors focusing on decision-making processes. Among the latter, Underhill (2000) points to cooperation between state regulators and markets, in contrast with Strange (1988) who highlighted the power struggle between them, illustrating the power of actors outside of institutions to exert influence on institutional decisions. Fung and Olin-Wright (2003) illustrated how centralisation of governance skews stakeholder institutional decision-making input, while Polanyi (1957) showed how currency governance affects and is affected by the number of functions fulfilled by a currency.

Despite covering individual facets of both monetary governance and economic functionality, none of these approaches integrates the impact of currency governance with scale on all stakeholders. In this context key questions arising from the limitations in the literature include: who are the stakeholders involved in monetary governance, and what criteria can be used to explore their input into that governance. This paper defines the scope of stakeholder participation as the widest possible social scope, which includes all users of money. The nature of stakeholder participation, given such a wide scope, can ideally be defined as both economic and democratic. A decision to either spend or boycott a particular currency is a market and functional use decision. However, living in a democratic society which upholds participation as a key principle makes access to decision-making processes a vital part of the nature of currency governance. While all currency users have the ability to affect the functionality of a currency

1 Although Adam Smith’s claim that money evolved out of barter is beyond the scope of this study, both Keynes and Gesell argued that Smith’s focus on the MoE function neglects crucial conflicts with SoV.
through use or non-use (i.e. boycott) of that currency, currencies which are either issued through central banks or which are privately issued do not allow for full user access to the decision-making processes involved in issuing and maintaining those currencies. It is this access to governance processes in conjunction with currency function and scale which is under-explored.

**Table 1: Stakeholders in Monetary Governance**

<table>
<thead>
<tr>
<th>Influences On Monetary Governance</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>External currency governance</td>
<td>National regulators as <em>indirect</em> stakeholders</td>
</tr>
<tr>
<td>Internal currency governance</td>
<td>Institutional decision-makers as <em>direct</em> stakeholders</td>
</tr>
<tr>
<td>Monetary scale</td>
<td>Users affected by money as <em>direct</em> stakeholders (often with no currency institutional decision-making power)</td>
</tr>
</tbody>
</table>

As noted previously, three key influences shape the governance of money and thus interface with stakeholders:

- First, the regulatory frameworks (RFs) external to a currency institution,
- Second, the decision-making processes internal to the currency institution,
- Third, the scale of the currency, here defined as the functions of money at various geographical ranges.

Table 1 above provides a typology of stakeholders vis-à-vis the influences shaping the governance of money mentioned above.

With regard to the (normative) criteria used to evaluate stakeholder input to monetary governance, OECD (2002) sources agree that established governance principles include predictability, or consistent use of legal frameworks, transparency and accountability. Johnson (1997) and others add participation, quoting the Canadian International Development Agency as using the terms participation and equitability interchangeably. Honest or predictable legal frameworks imply consistent treatment of currencies on the part of regulatory bodies. Transparency refers to access to information and to open processes, while accountability is defined by Kourtikakis (2004) as commitment by a responsible party to accomplish a given task. Hunt (1994) on the other hand, emphasises the link between accountability and responsibility, which implies a need for participation. Definitions of participation vary, as illustrated by contention around Arnstein’s (1969) widely cited Ladder of Participation. Henderson (2003) for instance worries that the Ladder, frequently used as a measure of participation, may not show community consultation as “real” participation. These criteria are more fully discussed further in this and related papers.

**External Governance: National Regulatory Treatment of Currencies**

This section begins the exploration of the three influences on monetary governance mentioned earlier vis-a-vis the governance principles used to evaluate stakeholder input on key decisions. To assist the reader, Table 2 below shows the application of these governance principles to the decisions that must be addressed by monetary institutions. They are presented by specific monetary governance influence and by type of stakeholder.

The first influence is external governance: the national regulatory treatment of different currency institutions and how consistently they are all treated. Although national monetary regulations exert both decision-making and functional influence on all currencies, national level monetary decision-making processes are closed to most currency stakeholders. Further, Lipsey (2007) acknowledges that conventional (national) economics neglects governance issues. National monetary policy indirectly controls issuance by manipulating the supply of money. Ingham (1999) asserts that those issuance decisions controlled by central banks affect every monetary transaction. Although independent central banking is intended to keep national currencies stable and free of manipulation, Iversen (1998) finds that highly centralized RFs reduce input from stake-

**Table 2: Governance Principles Applied to Monetary Institutions**

<table>
<thead>
<tr>
<th>Influences On Monetary Governance</th>
<th>Decisions Regarding</th>
<th>Governance Principles</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>External governance</td>
<td>Treatment of different currencies</td>
<td>Consistent treatment of currencies by (National) Regulatory Frameworks</td>
<td>Indirectly affected</td>
</tr>
<tr>
<td>Internal governance</td>
<td>Seigniorage, Issuance and Backing of the currency</td>
<td>Transparency Accountability Participation</td>
<td>Directly affected</td>
</tr>
<tr>
<td>Monetary scale</td>
<td>Use of currency by function and geography</td>
<td>Influence of currency users</td>
<td>Directly affected</td>
</tr>
</tbody>
</table>
holders. Thus, national regulatory consistency toward such institutions affects all currency stakeholders.

Furthermore, with regard to US national RFs, Solomon (1996), Glover (1997) and Shaffer (1998) point out that the US Internal Revenue Service (IRS) policy of taxing barter value has discouraged the use of some currencies by generating fear around their legality. However, Cezanne (2006) from a Central Banking perspective agrees with Miller (2004) speaking for Post-Keynesians that community-based currencies, which are sponsored by community groups for use within their local communities, tend to escape the notice of central banks, allowing greater freedom for such currencies. Grover (2006) in contrast believes that these regulatory uncertainties may adversely affect governance of small scale currencies. Such fears and uncertainties in turn can restrict the ability of stakeholders to set local monetary priorities through viable small scale currencies.

Internal Governance: Transparency, Accountability and Participation via Seigniorage, Issuance & Backing

Just as inconsistent external RFs affect access to currency institutional governance, likewise, internal institutional processes which lack transparency, accountability and participation similarly hinder such access. Transparency, accountability and participation are intrinsic to open governance and essential to monetary institutional decision-making. Discussions of economic democracy, brought about partly by a perceived lack of accessible national monetary governance, generally neglect these internal currency institutional decision-making processes in favour of distribution concerns (D’art, 1992, Ringen, 2004, Fotopoulos, 2005, Blasi and Kruse, 2006).

In general, the internal currency-specific governance processes most discussed in the literature involve decisions surrounding:

- Seigniorage revenue distribution,
- Issuance of the currency, and
- Backing of the currency.

In particular, former Federal Reserve Chairman Alan Greenspan (1996) defines seigniorage as the income obtained from creating the currency. Issuing money is the process of making currency available to spend either by providing credit, as banks do, or by directly spending money into the economy, while backing is the commodity or service for which a currency may be redeemed at its face value, which serves to allow currency exchange as a last resort.

Taylor (2003) contends that non-national currencies are a manifestation of stakeholder desire for greater participation in monetary governance. Groco (2001) agrees, classifying historical currencies in North America based on backing, which he concurs in defining as the commodity for which users can redeem the currency. Groco contends that backing is a key factor in the ability of a currency to empower communities. Ardran (2006) enlarges upon Greco’s work in discussing complementary currencies, which are non-national currencies designed to exist alongside national money. This definition of complementary currencies includes store loyalty points exchanged between non-store customers. Loyalty programs, typically studied as by Capizzi and Ferguson (2005), from the perspective of boosting business yield to a store or chain, are now coming to be seen as another potential vehicle for increasing stakeholder access to monetary institutional decision-making.

The aforementioned currency-specific decision-making processes remain under-investigated from the perspective of established internal governance principles, namely transparency, accountability and participation. Clearly, monetary institutions vary internally in degree of transparency. Although the Federal Reserve, as with most central banks, makes the minutes of its FOMC meetings public, those decisions are made with very little transparency in terms of the actors influencing those decisions. Little accountability to the public is encouraged, due to the doctrine of independent central banking. Governments remain accountable to citizens for mitigating the effects of the economy on daily life, but have limited policy tools with which to work. Hutchinson’s (2002) more holistic approach views money as socially constructed, echoing Dodd’s (1994) view that money promotes both freedom and inequality, exploring monetary system accountability as an element of economic democracy. Yet discussions of economic democracy, as previously mentioned, tend to neglect internal currency institutional governance, instead focusing on systems of management and distribution or profit sharing and Employee Stock Ownership Plans (ESOPs). This paper uses the more financially specific focus of Shared Monetary Governance (SMG) to encompass external regulatory influences, transparency, accountability and participation. Huber’s (2000) advocacy of including civil society representatives in seigniorage distribution and currency issuance decisions, although emphasising distributional aspects of governance, nonetheless also shows how seigniorage, issuance and backing decision-making processes are a key part of monetary system accountability.

Seigniorage revenue distribution, along with the issuance of money and currency backing is emphasised in monetary governance literature, as these three concerns relate directly to the process of money creation. Neumann (1992) discusses the relationship between inflation, inflation-based seigniorage revenue generation, and distribution of those revenues, but he neglects the decision-making process for seigniorage distribution which, by contrast, Huber (2000) stresses. Neumann and Huber agree on the importance of seigniorage to the issuance process in monetary creation based on the effects those seigniorage revenues can have, both on the initial creation of money, depending on how much income can be generated through currency creation, and on the subsequent value of that money. Kennedy (1995) points to the use of fiat money, i.e. money that is created from nothing and backed by faith in the issuing authority, and this seigniorage revenue windfall reaped by
commercial banks through the fractional reserve banking system as a significant monetary destabilising force. These effects will in turn directly affect the issuance and potentially even the backing of a currency. Neumann contends that democratic equity requires all currency users to be given an equal share of seigniorage revenues. Huber goes even further by arguing that all currency users have an important stake in how such decisions are made, particularly in democratic societies. This concern for equitable and democratic processes is articulated explicitly by Johnson (1997) as a crucial part of the set of governance principles, making it imperative that access to seigniorage decision-making processes be taken into account. Seigniorage decisions form one key part of currency-specific governance, just as currency issuance decisions form the next key.

Issuance decisions regarding national money are made without direct input from most money users, despite their being the most heavily affected stakeholders. Huber (1999) and Zarlenga (2002) agree on the need to regulate monetary issuance, emphasising transparency and accountability, but neglecting direct user participation. Hayek (1976), by suggesting the idea of private bank currency issuance, highlights the importance of creation and issuance of money, discussed by Fisher (1935), Rothbard (2002) and Rousseau (2006) from a banking perspective and by Kennedy (1995), Gesell (1906) and George (1879) from a money reform perspective. These discussions of currency governance however, focus on economic function and distribution, de-emphasising the problems of currency user access to and input into currency institutional decision-making. Although currency backing decision-making processes are interrelated with those of issuance decision-making, backing, discussed next, requires a separate set of decisions with separate consequences for various currency stakeholders.

Choice of backing is a third key currency decision in which most users of national money do not participate. Ardron and Lietaer (2006) suggest offering currency users a choice of backing, highlighting this neglected aspect of internal monetary governance. Keynesian economists argue that fiat money allows more options, for instance, for running deficits (Miller, 2004). Yet fiat currencies may also limit stakeholder ability to influence the functioning of money, since users have no choices for redeeming fiat money, whereas commodity-backed currencies generally allow stakeholders more redemption options. Community-based currency advocates Linton (1994) and Cahn (2006) assert that small scale currencies allow greater stakeholder decision-making input by facilitating direct participation in the currency institutions.

Table 3 summarises key decisions which must be made regarding currencies, as those decisions are emphasised by the various literatures in discussing monetary governance. North (1994) is a prominent voice from the perspective of institutionalism arguing for the importance of time lines, history and the culture of each institution as a significant factor in overall economic governance, in which monetary governance plays a crucial role. Many different literatures discuss the specific internal decisions around currency which must be made by these institutional decision-makers. Money specifically requires decisions about seigniorage revenues, the issuance of the currency, and its backing, as mentioned previously. Although these currency-specific concerns are discussed in a wide range of literatures, the functions of money tend to be discussed primarily by conventional economists, while the concept of limiting currency circulation by geographical area tends to be discussed mostly in the context of community-based currencies. Both sets generally either neglect governance entirely, or discuss decision-making processes separately from functional concerns.

**CURRENCY SCALE: FUNCTIONS AND GEOGRAPHICAL RANGE VIS-À-VIS SHARED MONETARY GOVERNANCE**

This section explores how different literatures understand the third influence on monetary governance, namely currency function vs. circulatory range, and how these affect and are affected by external and internal decision-making processes.

Societies and their economic institutions at the supra-national, national, and local levels have issued currencies, as Polanyi (1957) points out, in many forms throughout history. Traditionally, however, there has been no consen-

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**Table 3: Decisions in Currency Institutional Governance**

<table>
<thead>
<tr>
<th>Literature</th>
<th>Time Frames For Circulation (based On External Regulations)</th>
<th>Currency Specific Internal Decisions</th>
<th>Functional Scale</th>
<th>Geographical Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutionalisms</td>
<td>1. specific/unlimited</td>
<td>1. seigniorage</td>
<td>1. Unit of account</td>
<td>1. neighbourhood</td>
</tr>
<tr>
<td></td>
<td>2. unlimited</td>
<td>2. issuance</td>
<td>2. Medium of exchange</td>
<td>2. city</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. backing</td>
<td>3. Store of value</td>
<td>3. region</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Means of payment</td>
<td>4. nation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. convertibility</td>
<td>5. supra-national</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fragmented literatures</td>
<td>Conventional economics</td>
<td>Community currency advocates</td>
</tr>
</tbody>
</table>
sus regarding what should be the optimal geographical scale and function of a currency. Huber’s (2000) national level seigniorage reform suggestion contrasts with the small scale governance approach taken by Gesell (1906). Indeed, Gesell’s argument for functional separation as a way to overcome the hoarding induced by the use of money as a Store of Value (SoV) was praised by Keynes (1936) and advocated by Fisher (1933). Gatch (2006) and Greco (2001) similarly explore how locally circulated ‘scrip’ currencies, exchanged for farm produce and other goods during the 1930’s in the USA and Worgl Austria, separated currency functions. Seyfang (2006a) however, applies local sustainable development perspectives to currency design objectives, pointing out that local priorities may adversely affect governance at higher levels. Thomas (2004), furthermore, notes that currency design and the functions which a currency emphasises depend heavily upon the goals of the institution issuing the currency. Yet Freidman (1972), Greenspan (1996), and Hayek (1976) agree that external Regulatory Frameworks, taken for granted by Lipsey (2007), can override internal currency governance. Since Mundell (1961) and Boyle (2003) show currencies to function differently in different regions due to the effects of geographical scale on monetary functionality, separate governance mechanisms could allow more stakeholder control over local monetary priority setting. In this light, it is necessary to examine the role of monetary functions and geography in more detail. These are the two dimensions of what is summarily defined as currency scale, which are examined below.

Currency Functionality: The First Dimension of Currency Scale

Currencies can fulfil one or more functions. The scope of this paper prohibits a full discussion of views based on these functions, such as the Chartalists. Each currency function affects monetary governance differently, as Keynes (1936) asserted, showing how conflicting Medium of Exchange and Store of Value functions affect national currencies. Indeed, Polanyi (1977) asserted that there were two distinct categories of money based on the number of functions the currency fills: General Purpose money and Special Purpose Currencies. Different currencies were used for different purposes. General purpose money refers to money used as a Unit of Account (UoA), Medium of Exchange (MoE), and Store of Value (SoV). By Polanyi’s definition, currencies which do not perform all three of these functions, contrastingly, are denoted as Special Purpose Currencies (SPCs). Furthermore, while state or local authority acceptance of a currency for payment of taxes and fees or fines can encourage the use of that currency, as Miller (2004) and Douthwaite (1996) agree, nevertheless such acceptance did not change the functional aspects of those currencies. To illustrate, cases where SPCs have been accepted as a Means of Payment (MoP) by local government authorities, cited by Douthwaite (1996), North (2007) and Gomez (2008), in places such as Worgl, Austria, Salta, Argentina, Auckland NZ and Venado Tuerto, Argentina did not change the functional emphasis of those community-based currencies significantly enough to make them widely used for all three key functions of accounting, exchange, and long term storage of value. Hence those currencies remained SPCs rather than General Purpose money. Table 4 illustrates currency scale by function and geography.

Table 5: Indicative Typology of Currencies Based on Predominate Functions

<table>
<thead>
<tr>
<th>Monetary Functions Fulfilled</th>
<th>Time Banks</th>
<th>LETS And Other Mutual Credit Currencies</th>
<th>Worgl, Austria (1932) Scrip</th>
<th>USA 1930s Stamp Scrip</th>
<th>National Currencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit of Account</td>
<td>secondary</td>
<td>primary</td>
<td>secondary</td>
<td>secondary</td>
<td>primary</td>
</tr>
<tr>
<td>Medium of Exchange</td>
<td>tertiary</td>
<td>secondary</td>
<td>primary</td>
<td>primary</td>
<td>primary</td>
</tr>
<tr>
<td>Store of Value</td>
<td>primary</td>
<td>secondary</td>
<td>primary</td>
<td>primary</td>
<td>primary</td>
</tr>
</tbody>
</table>

Polanyi (1977) saw national currencies as forms of general purpose money because they fill the three functions of UoA, MoE and SoV. Melitz (1970), in contrast, argues that notes and coins, by their nature limited to hand-to-hand transactions, differ from checking and savings accounts and thus constitute SPCs rather than general purpose money. However, Melitz under-emphasises convertibility between forms of modern national money which Dalton (1965) and Codere (1968) agree make it General Purpose. Miller (2004) concurs that the MoP function, by generating a guaranteed requirement for the currency, does stimulate circulation, mitigating regional impacts of monetary instability, but reiterates Codere’s (1968) warning that currency functions, by emphasizing credit, exchange, or stored value over time, affect stakeholders differently. Table 5 provides
an indicative typology of how the various monetary functions affect currency decision-making in different ways depending on the function emphasised by the particular currency. How these functions are discussed in the literature is given in more detail next.

Unit of Account Functionality
The UoA function manifests through prices. Every currency acts as a UoA, but Mutual Credit System (MCS) currencies are special. In an MCS, money, by crediting a mutually agreed upon price into the account of the seller from the account of the purchaser, is created directly by the two parties as Harris-Braun (2006) describes, ‘at the point of transaction’. MCS currencies tend to emphasise the UoA function, with members extending one another credit in paper or electronic accounts by trading goods or services. Douthwaite (1996), Kennedy (1995), and Primavera (2001a) discuss two well-known MCS currencies: Local Exchange Trading Systems (LETS) and the Swiss WiR. Such currencies, by allowing users to issue the currency directly, leave all money-creation decisions to currency users rather than central banks, which often results in price and circulation instability which in turn affects currency viability. Lee (2004) and Douthwaite (1996) warn that currencies with no circulation oversight can be especially vulnerable to instability. On the other hand, the economic crisis which began in 2008 demonstrates that central bank oversight, while severely limiting currency user input, nonetheless does not guarantee monetary stability. Therefore price and credit stability, although functional in nature, is clearly a stakeholder governance concern.

Medium of Exchange Functionality
Jackson (1997) finds that the unlimited ability of currency users to issue money through such complementary currencies as LETS often results in currency over-issuance, which in turn leads to circulation problems. Seyfang (2001) and Davis (1987) on the other hand, find that despite these over-issuance problems, community-based currencies do boost local economies. Rothbard (2002) for instance blames over-issuance for the collapse of the "Continental", the currency issued as the USA’s first national Medium of Exchange (MoE) at the founding of the new republic. Rousseau (2006) likewise focuses primarily on over-issuance of the Continental, although Desa (2005) blames backing problems for the Continental's demise. While Primavera (2005) similarly asserts that over-issue caused the sudden collapse of Argentina’s Red Trueque system, a particularly large scale non-national MoE, North (2007) counters that external hostility toward the system as it grew in scale was a significant influence in its demise. Indeed, MoE emphasising currencies which limit circulation, such as the community-based currency in New York state known as ‘Ithaca Hours’ described by Mascornick (2007), do tend to be more stable. For this reason Lee (2004) emphasises the need for currency participants to understand monetary fundamentals if they are to make issuance decisions. Given the fact that issuance affects monetary exchange and thus heavily affects its value, it is important to discuss the third function of money, namely Storage of Value (SoV).

Store of Value Functionality
Value can be stored as money, or stored in a commodity such as gold or diamonds. Gesell (1906) argued that the SoV function when included in a currency encourages hoarding. Le Blanc (1998) draws connections between the work of Keynes and Gesell which Greco (2001) agrees show many examples of stamp scrip as a successful MoE, but with no SoV function. Removing the SoV function leaves a monetary niche which is filled by Time Bank currencies, the most well-known currency to emphasise this function. Time Banks use hours as the standard unit of currency, recording each member's account deposits and withdrawals for services rendered to or accepted from other members of the community, with goods increasingly being traded in this way as well. Seyfang (2006b) asserts that Time Bank currencies are an effective SoV, with Collom (2007) listing Time Banks as the most wide-spread community-based currency. Although Lee (2004) points out that an hour is worth more or less at different times and depending on the task, one hour never loses its value as an hour. While time may allow storage of monetary value in a community where stakeholders know and trust one another, larger scales may inhibit the trust necessary for retaining that value over longer time periods and geographical distances. Turning next to the question of geography as it influences scale will round out the discussion of how scale influences monetary governance decisions.

Geographical Range: The Second Dimension of Currency Scale
Monetary function influences both national RF treatment and decision-making within currency institutions. While discussing J.S. Mill’s dislike of multiple currencies due to accounting difficulties and currency exchange, the issue of interaction between function and geography prompted Nobel Prize winner Robert Mundell (1961) to observe that “the optimum currency area is not the world”. Boyle (2003) cites Mundell (1961) in asserting that the geographical effects of currency function change from region to

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2 Gesell suggested a usage change on the money itself to prevent such hoarding. Planes joins calls for 'demurrage' charge implementation, quoting Lietar (2000b) and Primavera (2001b) on artificial scarcity through the SoV function if the currency maintains equal or higher value in the future. Greco claimed success for demurrage arguing that 1930s stamp scrip in the US and Worgl, Austria, was effective in speeding the circulation of local currencies.

3 Buiter (2000) and McKinnon (2004) are among the many who have applied Mundell’s groundbreaking optimum currency area theory. Mundell discusses the optimum geographical area for a currency, arguing for flexible exchange rates among currency areas rather than among national currencies.
region, thus advocating different currencies for different regions in accord with Noyer (2006) and Munchau (2006) who both acknowledge that price inflation affects currency stability as a Unit of Account (UoA) differently in different regions.

While non-national currencies have little macro-economic impact compared to national currencies, DeMeulenaere’s (2006) database of non-national currencies shows over five million world-wide users. Indeed, Jayaraman (2005) asserts their lack of macro-economic impact to be an asset, since it allows community-based currencies to be used to unambiguously signal demand for local products, while Schraven (2000) also finds that smaller scale currencies build social capital. North (2005) and Grover (2006) point to the small scale of community-based currencies as a problem which Seyfang (2001) disputes, pointing out that local priority setting may be inhibited by large scales. Aldridge (2002) and Davis (1987) concur, finding that currency function at the local level depends on local decision-making, while North (2002) describes how exchange disruptions caused by large usage increases in turn created difficulties both for users of the currency and for those involved in making decisions about how to administer the currency. These problems brought on by the influence of geographical circulation on currency institutional decisions confirm that interactions between the functions of money and geographical range of circulation also impact currency governance. As Boyle and Mundell point out, incompatible regions which share a single currency will see the competing needs of those regions affecting governance of the currency. Those decisions, which in turn affect currency users in some regions more adversely than users of that same currency in other regions, could potentially be made at levels closer to the affected users themselves if incompatible regions had separate regional currencies. Interconnexion between currency institutions at various levels, as suggested by Fung (2001), could allow for coordination between various parts of the monetary system, and cooperation at local, national and also international levels.

CONCLUSION

Currency stakeholders, including external regulators, internal decision-makers and currency users, are affected by currency governance, but there exists no clear model for what shared decision-making among all stakeholders might look like. Stakeholders include regulators, currency organisers, producers and consumers who use money. While those who wield external structural influence over the governance of money such as states and bankers tend to exclude consumers from monetary decision-making, consumers, as currency users, are in fact key stakeholders who most likely have produced the very value to which that money allows access. Indeed, the Polanyian re-embedding of currency decision-making within small scale socio-economic spaces such as communities or even local businesses may facilitate greater access by all currency users to both monetary decision-making and distribution. While money interacts with other parts of the economic system such as production, distribution and consumption, the full role of stakeholder decision-making in money remains under-investigated. Applying a multi-faceted approach to understanding monetary governance illuminates the potential of (and problems with) stakeholder input to currency institutional decision-making processes. However, problems raised by research on non-national currencies indicate the need to distinguish regulatory issues from scale issues. Thus, a re-conceptualisation of monetary governance which places stakeholder access at its core is carried out in future papers.

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