The Greshm System

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What It Is

The Greshm System is a USD-based payment system that issues new money to its users in the form of a basic income. Basic income lessens the extent to which consumer income depends on the unpredictable performance of the labor market and the strength of the volatile private financial sector.

The Greshm System maintains a fractional reserve of USD to back the USD-denominated balances recorded in Greshm user accounts. Users may *spend* their Greshm balances at any time, but before they withdraw any money, they must hold it in their accounts for a period of time (e.g. 30 days). This rule encourages users to spend money within the system rather than drain the system's USD reserves.

The Greshm System gets its name from Gresham's law, which is the economic principle that "bad money drives out good." For example, when the US stopped minting silver quarters, people hoarded the more valuable silver quarters, preferentially spending the new less valuable quarters. The new quarters then quickly replaced the silver quarters in active circulation.

The Greshm System rolls out by gradually activating people's basic incomes. Thanks to Gresham's Law, Greshm users will preferentially spend their Greshm balances before they spend their outside money.

Basic Income

As typically envisioned, a basic income is an unconditional income stream paid by a country's government to its citizens. By contrast, the Greshm System starts with a small group of recipients in one city before rapidly expanding to all people everywhere. This paper refers to income issued by the Greshm System as a basic income despite the fact that initially not everyone will receive it.

For the purposes of this paper, a basic income is not required to be of an amount sufficient to pay for individuals' basic needs. The word "basic" indicates that it establishes a base upon which further income (e.g. wages) can be added. Everyone receiving basic income receives the same amount.

Why We Need Basic Income

The way governments get people their money is broken. They use monetary policy to over-stimulate the financial sector to create unproductive jobs as a way of pushing money to consumers. This process distorts the labor market away from efficiency and fuels an unstable cycle of booms and recessions. Meanwhile, people remain needlessly busy and needlessly poor.

Basic income issues money into the economy evenly. This allows people to buy what the economy is already capable of producing. Unlike private debt and unlike wages, basic income can reliably sustain consumer purchasing power while protecting the economy from credit-related instability.

Economic Concerns

The effects of basic income are counterintuitive. For example, basic income allows more people to abstain from work, which one might think would reduce economic output. But when jobs exist to push money to workers rather than for the product of the labor, this is not the case. Furthermore, when the economy is operating below its productive capacity, additional spending induces more production.

Another common concern is that adding new money to the economy would cause inflation. But basic income replaces unstable credit expansion as the source of consumer spending power. In the presence of basic income, central banks can tighten credit conditions to stabilize both the financial sector and the price level.

Skeptical readers should remain skeptical. A thorough description of the economic theory behind basic income is beyond the scope of this paper.

How the System Works

The core mechanism behind the Greshm System is that Greshm balances have a term to maturity (e.g. 30 days) after which users may withdraw them. Whenever someone makes a payment within the system, that money's term resets. The more that Greshm balances circulate, the less potential drain on the system's USD reserves.

Users may freely deposit outside money into their Greshm accounts. But because they must wait to withdraw it, the Greshm System is immune to a "bank run" during which people panic and withdraw their deposits en masse. To get rid of their Greshm balances, they must spend them. The same psychology that normally causes a bank run to accelerate has the opposite effect on the Greshm System.

The Greshm System requires merchant partners to charge the same prices when customers pay with Greshm. Given the choice, users will prefer to spend their Greshm balances first and save their outside money for when it is needed. Any distrust in the Greshm System drives further circulation of Greshm balances.

Launching the System

The first step is to choose a city, establish an initial cohort of local merchant partners, and fund the initial USD reserves. The first basic incomes will then go to lower-income individuals living in the launch city. Lower-income individuals are more likely to spend any money they receive. The merchants then benefit from the additional patronage of customers who have new money to spend.

For the term of the initial merchant contracts, the system's USD reserves will be sufficient to cover the withdrawal of all Greshm balances. The merchant network therefore faces no credit risk in the event that the system fails. The cost to merchants lies entirely in waiting to withdraw their balances. They can mitigate this cost by spending via the Greshm System. Spending options include buying from other businesses in the Greshm merchant network, providing bonuses to their employees, and donating to charities.

The system will expand to more regions and grow its coverage within existing regions. Acceptance of Greshm payments further up the supply chain gives merchants more opportunities to spend their balances.

Maturity Cap

The maturity cap is a limit to the size of the "active balances" in an account. Active balances are Greshm balances whose term to maturity has begun. When money is newly added to a Greshm account, it only becomes active once there is room for it under the cap. To allow more balances to activate, the account owner must withdraw or spend some of his active balances.

The maturity cap limits the quantity of USD reserves tied up by rarely used accounts and accounts that hoard large amounts of money. The cap can be set above the level where ordinary users will notice it.

Greshm Account Types

- **Starter Accounts** require no identity confirmation. They receive no basic income. Balances remain inactive.

- **Pending Accounts** are available to individuals with confirmed identity. Pending accounts are like starter accounts except that balances activate normally. They upgrade into basic accounts.

- **Basic Accounts** are the standard accounts for individuals. Their balances activate and they receive a basic income.

- **Business Accounts** belong to businesses with confirmed identities. Their balances activate, but they do not receive a basic income.

- **Merchant Accounts** belong to businesses who sign a contract agreeing not to charge higher prices to Greshm customers. In exchange, the merchant partners are exempt from the maturity cap.

Required Reserves

With the exception of starter accounts, the Greshm System maintains a minimum level of reserves to back each account's balances. Basic accounts, pending accounts, and business accounts all share a standard minimum reserve ratio. Each merchant account's ratio is individually negotiated.

At launch, all Greshm balances will be matched by reserves. As the Greshm System gains traction, the standard minimum reserve ratio will decrease. Merchants will renegotiate their reserve ratios as they renew their contracts. Lower ratios allow the money in the system to exceed its reserves. Regardless of reserve ratios, all Greshm balances are withdrawable when they mature.

Disruption

Disruption occurs when the Greshm System's reserves drop to the required minimum level, as determined by the reserve ratios. Reserves become insufficient to cover additional active Greshm balances. Users can help stave off Disruption by spending active balances, thereby resetting their term to maturity.

During Disruption, new Greshm balances remain inactive until reserves become sufficient to cover them. When Greshm balances mature, only the portion covered by the reserve ratio becomes withdrawable. The remaining portion resets as if newly added to the account. Merchant partners can charge different prices to Greshm customers. Users can still send payments and receive their basic incomes.

As the Greshm System's reserves replenish, more Greshm balances will activate. Disruption ends once the reserves again exceed the minimum required level.

Transition Date

The Greshm System is designed to stand on its own eventually, without any USD backing. Greshm account balances become a kind of free-floating currency. On a date pre-determined at the launch of the system, newly received payments will no longer be withdrawable as USD. This is the transition date.

By the time the transition arrives, the Greshm System will have either established itself or not. Ideally, everyone the world over a certain age will be receiving a basic income through the Greshm System.

During the time between the launch date and the transition date, certain parameters of Greshm will gradually change. The minimum required reserve ratios will decrease. The term to maturity of new Greshm balances will increase. The amount of the basic income and the number of recipients will also increase.

Funding Reserves

The entity that manages the reserves—and other parameters—of the Greshm System is called the Greshm Authority.

Greshm Notes are debt-like securities issued by the Greshm Authority and managed within the Greshm System. The notes are issued at a discount and mature at face value on the transition date. By soaking up Greshm balances, Greshm Note issuance can pull in new reserves and stem the outflow of existing reserves.

Greshm Shares are equity-like securities issued by the Greshm Authority and managed within the Greshm system. For every dollar of basic income issued, some number of cents is simultaneously issued and divided evenly among the Greshm shares. The more basic income recipients and the higher the level of basic income, the greater the income stream to the shareholders.

In addition to the instruments listed above, a passive inflow of reserves occurs whenever a user makes a payment that pulls outside money from a linked bank account.

Greshm Account Balances

Accounts have balances of USD, Greshm Notes, and Greshm Shares. The USD balance is divided into four parts, which we can label using colors:

- **White** — Withdrawable now.
- **Green** — Guaranteed to be withdrawable upon maturity.
- **Yellow** — Guaranteed up to the minimum reserve ratio.
- **Red** — Not yet active. No withdrawal guarantees.

Spending comes from the red balance first, yellow next, then green, and finally white. The more that Greshm users spend money within the Greshm System, the greener everyone else's Greshm balances become.

Renewing Greshm Balances

Greshm users can opt to disable the withdrawal of their maturing balances, choosing instead to renew the term. Doing so alleviates pressure on the system's USD reserves. The Greshm Authority may decide to pay interest as an incentive for people to renew their Greshm balances.

Here is a possible set of options for users to pick from:

- Always make the money withdrawable (default)
- Renew except during Disruption. Earn interest.
- Always renew. Earn more interest.