

Greshm

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What It Is

Greshm is a government-independent basic income system. We use a USD-backed digital currency to generate a permanent income for every person. Basic income lessens the extent to which consumer spending depends on the unpredictable performance of the labor market and the strength of the volatile private financial sector.

Project Greshm manages the Greshm (XGD) currency for the benefit of society. We maintain a reserve of USD to back up its value. XGD is pegged to USD at par (one-to-one). After a period of time (e.g. 30 days), XGD matures into USD from the reserves. This rule enforces the peg. Whenever a unit of XGD changes hands, its term to maturity restarts. Circulation of XGD therefore lessens the impact on our USD reserves.

Greshm 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.

We will introduce Greshm gradually by handing out XGD to individuals. Thanks to Gresham's Law, people will preferentially spend XGD instead of USD. Preference to circulate XGD helps protect our USD reserves.

Basic Income

Basic income is *a regular income unconditionally paid to every individual.*

“Every individual” usually means all people in a particular economy. As typically envisioned, a basic income is an unconditional income stream paid by a country's government to its citizens. By contrast, our plan is to start with a small group of recipients in one city before gradually expanding to all citizens of the world. This paper refers to the XGD income 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 economy will generally only produce what people can afford to buy. Historically, it has been very difficult to ensure that consumers have sufficient purchasing power to fully benefit from our economy's productive capacity. To some extent, consumers can compensate for a shortfall of income by borrowing money, but too much debt can be a problem.

Basic income is a way to create money and spend it 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. This is concerning. But labor is just one among many resources that contribute to productive capacity. When the economy is already operating below its capacity, the additional spending induces more production.

Another common concern is that adding new money to the economy would cause inflation. But inflation occurs only when the amount of spending on goods and services outstrips the economy's productive capacity. Additional spending is not a problem when the economy has the capacity to meet the new demand.

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

How Greshm Works

The core mechanism behind Greshm is that each unit of XGD has a term to maturity (e.g. 30 days) after which we exchange it for an equal amount of USD from our reserves. Whenever someone spends a unit of XGD, its term resets. Thus the more that XGD circulates, the less it matures, and the less we tap into our USD reserves.

People may freely exchange USD for XGD. But because XGD takes time to mature into USD, Greshm is immune to currency runs during which people panic and sell a currency en masse in exchange for a more trusted currency. Because XGD's term to maturity resets when it is spent, the same psychology that normally depletes the reserves of a central bank has the opposite effect on the USD reserves backing Greshm.

\$1 XGD matures into exactly \$1 USD, so prices can simply be set in dollars. Greshm merchant partners are required to set prices equally in XGD and USD. Consumers will prefer to spend XGD over USD when they have a choice because they'll want to save their more versatile USD for when it's needed. XGD is an IOU for USD. Any consumer distrust in the payment of that IOU causes XGD to circulate more.

How We Introduce Greshm

After funding our initial USD reserves, we first introduce XGD into circulation via basic incomes provided to low-income individuals in a specific city or region. We partner with a network of local merchants who agree to accept XGD payments at face value. These merchants then benefit from the additional patronage of customers who want to spend their XGD.

For the duration of the initial merchant contracts, our USD reserves will be sufficient to guarantee all XGD when it matures. The merchant network therefore faces no credit risk in the event that Greshm fails. The cost to merchants lies entirely in waiting for XGD to mature. They can mitigate this cost by spending XGD directly. Merchants' spending options include buying from other businesses in the Greshm merchant network, providing bonuses to their employees, and donating to charities.

After we launch, we will expand the basic income and merchant network to new regions. We will also expand coverage within existing regions. As businesses begin to accept XGD payments further up the supply chain, merchants will have more opportunities to spend their XGD.

Maturity Cap

The maturity cap is a limit to the total sum of USD and active XGD in an account. *Active XGD* is XGD whose term to maturity has begun. When XGD is newly added to an account, it does not then become active until there is room for it under the cap. For example, if the cap is \$600, no new XGD will become active in an account that already has \$600 in combined USD and active XGD. To allow more XGD to activate, the account owner will have to withdraw or spend some of that money.

The maturity cap mitigates the drain on USD reserves caused by inactive accounts and by users who hoard large amounts of XGD. We will set the cap at a level where ordinary users should not notice it.

Greshm Account Types

Starter Account

Starter accounts require no identity confirmation. They receive no basic income. XGD in these accounts does not mature. Opening a starter account is the easiest way to start transacting in XGD.

Pending Account

Any individual with a confirmed identity may open a pending account. Pending accounts are like starter accounts except that their XGD matures. They upgrade into basic accounts.

Basic Account

Basic accounts are the standard accounts for individuals. Their XGD matures and they receive a basic income.

Business Account

Business accounts belong to businesses with confirmed identities. Their XGD matures but they do not receive a basic income.

Merchant Account

Merchant accounts belong to businesses in the Greshm merchant network. These accounts are not subject to the maturity cap. Greshm merchants must sign a contract agreeing to set prices equally in XGD and USD.

Required USD Reserves

With the exception of starter accounts, each Greshm account has an associated minimum reserve ratio. This means that we promise to maintain a minimum amount of USD in our reserves to back the XGD in that account. Basic accounts, pending accounts, and business accounts all share the same standard minimum reserve ratio. By contrast, each merchant account's minimum reserve ratio is individually negotiated.

When Greshm first launches, the minimum reserve ratio for all accounts will be 100%. This means we will hold sufficient USD reserves for all active XGD to mature. As Greshm gains traction, we will gradually decrease the standard minimum reserve ratio as well as the minimum reserve ratios for individual merchants. This allows the total amount of XGD to exceed the amount of USD backing it. We renegotiate merchant reserve ratios when we renew their contracts.

Disruption

Regardless of minimum reserve ratios, active XGD normally matures into USD at a rate of 100%. The minimum reserve ratios come into play only during Disruption.

Disruption occurs if the amount of our actual USD reserves drops to the level of our required USD reserves. At this point, our USD reserves become insufficient to back additional active XGD. Users help stave off Disruption by spending active XGD thereby resetting its term to maturity. We continuously publish an estimate of the soonest-possible (worst-case) Disruption date.

During Disruption, the Greshm system will function normally in most ways. XGD will circulate and users will receive their basic incomes. However, any new XGD added to an account will remain inactive (term to maturity does not begin) until there are enough USD reserves to back it. During Disruption, we will not require the Greshm merchants to accept XGD at face value.

Active XGD will continue to mature. When it matures, it converts into an amount of USD determined by the account's minimum reserve ratio. We renew any XGD that doesn't convert to USD. For example, if an account has an 80% reserve requirement, each maturing XGD converts into 80 cents of USD and 20 of cents new XGD.

As our USD reserves replenish, more XGD will activate. Once our total USD reserves again become sufficient to satisfy all minimum reserve ratios, Disruption ends.

Transition Date

Greshm is designed to stand on its own eventually. There will come a time after which new XGD will no longer mature. This is the transition date. The transition date is a special kind of planned Disruption that we schedule when we launch Greshm. By scheduling the transition ahead of time, we will have predetermined a date by which Greshm will have either succeeded or failed in establishing itself as a currency. On the transition date, everyone in the world (or as close as possible) over a certain age will be receiving a basic income in XGD.

After transition occurs, active XGD will remain active. Inactive XGD will keep its term length and activate according to the normal rules. New XGD will never mature and hence never be assigned a term length. Greshm will become a free-floating currency. During the time between the launch date and the transition date, certain parameters of Greshm will gradually change; we will increase length of the term to maturity of new XGD, decrease minimum reserve ratios, increase the number of basic accounts, and upgrade pending accounts to basic accounts. We may also add other reserve currencies.

During the time between Greshm's launch and the transition date, the length of XGD's term to maturity will increase continuously. For example, the term length may double every two years until the transition occurs. XGD that is newly added to an account is always assigned a term length corresponding to the then-current point in time.

Funding USD Reserves

We fund our USD reserves primarily by using another currency called Greshm Notes. Greshm Notes are denominated in dollars just like XGD, but we sell them at a discount to face value. On the transition date, all Greshm Notes will mature into XGD at face value. As the transition approaches, Greshm Notes will therefore converge in price to XGD. In XGD terms, anyone who has bought Greshm Notes will have profited.

People must spend XGD to purchase Greshm Notes. Either they'll spend existing XGD, which helps protect our existing USD reserves, or they'll convert USD into new XGD, which helps boost our reserves. Buying Greshm Notes can be thought of as investing in the future success of Greshm or as donating to help support Project Greshm.

We will conduct a Greshm Note auction to fund our initial USD reserves. This auction will determine an appropriate starting price for Greshm Notes. After launch, we will periodically auction off more Greshm Notes to expand our USD reserves as the amount of XGD expands.

Greshm Account Balances

Accounts have balances of XGD, USD, and Greshm Notes. The XGD balance is divided into three parts:

Green — Active XGD that is guaranteed to mature even if everyone stops spending XGD immediately.

Yellow — Active XGD that is guaranteed only up to the account's minimum reserve ratio.

Red — XGD that is not yet active. No guarantees.

Spending comes from the red balance first, then yellow, then green. As users collectively spend their XGD, the earliest potential Disruption date moves further into the future and the green balance grows.

Renewing XGD

Greshm users have the option of disabling the automatic conversion to USD when their XGD matures, instead renewing its term. Doing so alleviates pressure on our USD reserves. We can pay interest as an incentive for people to renew their XGD.

Here are three possible options for what happens when XGD matures:

1. Always convert to USD (default)
2. Renew during normal times, but convert to USD during Disruption. Earn interest.
3. Always renew. Earn **more** interest than option 2.

Conclusion

The inadequacy of the labor market in distributing incomes to consumers has resulted in a history of economic instability. As technological innovation increases humanity's capacity to produce wealth, we need an income distribution system that can keep up. Greshm's basic income offers a way forward.