Hyperdeflation Scenarios

VIP$ hyperdeflation happens during ABC Phase II. This is not conjecture, but a law of nature; if all of something is in Place A, it cannot also be in a different Place B. In our case, if all of VIP$ are sequestered, they cannot also be in circulation.

This alone is not enough for hyperdeflation. A second aspect is that people have to demand VIP$. In our case, they are the ticket to a lifetime Earth Dividend; a winning lottery ticket.

In this module, the effects of various parameters on the timing of hyperdeflation are studied. In Phase II Monetary Policy, this data will be used to explore effective monetary policy.

ABC Phase II begins when there is no more land to purchase into the commons trust. All obstacles are political (governments won't allow it or the remaining sellers are too reluctant). There are no more "for sale" properties anywhere in the world where the jurisdiction has allowed sale into a commons trust.

In this simulation, after purchasing $86 trillion worth of land into a commons trust during Phase I, there are no more willing land sellers. 75 trillion VIP$ remain unbanked. The simulation begins in Month 240, the last month of ABC-The First 20 Years. It was the last month of U.S. dollar land purchases.

All ground rent that went to the land account will go to the Earth Dividend Subsidy Fund (EDSF) in Phase II. This fund receives 70% x 75% = 52.5% of all ground rent and is used to award Earth Dividends.

When Earth Dividends are awarded, the money is moved from the EDSF to the present value fund. If the Earth Dividend was won at auction, auction proceeds are also moved to the present value fund.

Global Variables and Parameters

In Phase II, money sequestered in the present value fund can only be released into circulation at the rate of $1,000/Earth Dividend Holder/Month. In order to hit hyperdeflation in a reasonable time frame, the EDSF and present value fund must grow by a minimum amount each month. To achieve this, parameters are set by the VIP Treasury in response to exogenous variables.

Auction Multiplier	102.63%	Parameter
Monthly Inflation Rate Over VIP$ Deflation	-0.020%	Exogenous
Minimum Present Value Circuit Breaker	70,000,000,000	Parameter
Deflation in Earth Dividend Services	0.60%	Function

A major feature of the present value fund is VIP$ sequestration, eliminating the possibility of investment income. The only return on this fund comes from the small dividend on the VIP$. In simulations, this never goes below 0.1%. This is far less than the 4% return used to calculate the present value of an average Earth Dividend.

However, the primary source of return is the deflation of the VIP$. It is assumed that the VIP Treasury will have an average annual deflation rate of 3.9% during Phase II prior to the onset of hyperdeflation. If deflation falls below 2%, the present value of an Earth Dividend must be raised, or the awarding of Earth Dividends halted for a month or two (See below).

One tool available to the Treasury is the auction of Earth Dividends. While original residents of Phase II communities have a maximum bid of $1 VIP (winners among high bidders chosen by lottery), half of the Earth Dividends in ABC Phase II are auctioned off to the highest bidders of actuarial present value.

There is a formula for determining how much extra money goes to the present value fund from these auctions. The formula is called the auction multiplier and is multiplied by the EDSF to get the total added to the present value fund. The formula for auction multiplier is ((200% - %Present Value Bid)/ (100% - %Present Value Bid))/2.

An auction multiplier used in most simulations,102.63%, assumes an average winning bid of 5% of actuarial present value, $12,500 on average, which is extremely conservative for a worldwide auction of Earth Dividends.

The Treasury can increase or decrease the number of auctions versus the number of nominal ($1 VIP) Earth Dividends, as well as change the maximum and minimum bids. The ABC will follow Treasury guidelines. Phase II communities have no such constraints on their EDSF.

The monthly U.S. dollar inflation rate over VIP$ deflation is not under control of the VIP Treasury. Deflation in food, housing, medicine, education, and government services will be completely, or partially, enjoyed by U.S. dollar consumers as well as Earth Dividend holders.

However, inflation in luxury and discretionary goods, possibly severe, as productive resources shift to Earth Dividend services, will bring the expected net U.S. dollar inflation over and above VIP$ deflation to zero. It is a function of the composition of the basket of goods used by legacy governments to measure inflation. Conservatively, a monthly U.S. dollar deflation rate of 0.02% is assumed by default.

The “Minimum Present Value Circuit Breaker” of 70 billion is completely under the control of the VIP Treasury. Using the value in the table above, should the combined EDSF and present value fund fail to grow by $70 billion/month, the awarding of new Earth Dividends is suspended.

The Spreadsheet

Based on these parameters, here are the first 15 months of Phase II and the last 16 months of Phase II prior to the first onset of hyperdeflation:

Month	Total VIP$ Minus Bank (Month 240 = Parity)	Rent Share to Earth Dividend Subsidy Fund	EDSF + Present Value Fund	Supported Earth Dividend Holders	Monthly Ground Rent Revenue	VIP$ Savings, Retail and Treble Demand (Month 240 = Parity)	Cumulative VIP$ Deflation	Monthly Deflation	Present Value for an Earth Dividend (Month 240 = Parity)	Number of Supportable Earth Dividends
240	75,436,388,945,536	$47,405,434,086	8,161,698,091,976	32,646,792	$180,592,129,851	65,107,585,295,346	0%		250,000	32,646,792
241	75,436,388,945,536	$94,791,905,998	8,233,930,702,534	32,836,414	$180,556,011,425	65,035,786,105,899	0.11%	0.11%	249,724	33,026,379
242	75,436,388,945,536	$94,877,597,417	8,305,933,172,748	33,215,581	$180,719,233,176	64,961,824,974,681	0.22%	0.11%	249,440	33,406,741
243	75,436,388,945,536	$94,966,762,355	8,377,708,568,950	33,595,092	$180,889,071,152	64,888,011,522,762	0.34%	0.11%	249,157	33,787,893
244	75,436,388,945,536	$95,056,040,976	8,449,256,463,103	33,974,959	$181,059,125,669	64,814,422,974,408	0.45%	0.11%	248,874	34,169,837
245	75,436,388,945,536	$95,145,319,037	8,520,576,307,927	34,355,183	$181,229,179,118	64,741,062,488,193	0.57%	0.11%	248,593	34,552,573
246	75,436,388,945,536	$95,234,590,292	8,591,667,549,214	34,735,764	$181,399,219,604	64,667,930,761,080	0.68%	0.11%	248,312	34,936,101
247	75,436,388,945,536	$95,323,852,075	8,662,529,629,556	35,116,703	$181,569,242,048	64,595,028,411,401	0.79%	0.11%	248,032	35,320,422
248	75,436,388,945,536	$95,413,101,815	8,733,161,988,453	35,497,998	$181,739,241,553	64,522,356,058,450	0.91%	0.11%	247,753	35,705,536
249	75,436,388,945,536	$95,502,336,916	8,803,564,062,297	35,879,650	$181,909,213,173	64,449,914,325,163	1.02%	0.11%	247,475	36,091,444
250	75,436,388,945,536	$95,591,554,754	8,873,735,284,347	36,261,660	$182,079,151,913	64,377,703,838,235	1.13%	0.11%	247,197	36,478,145
251	75,436,388,945,536	$95,680,752,679	8,943,675,084,712	36,644,026	$182,249,052,723	64,305,725,228,152	1.25%	0.11%	246,921	36,865,640
252	75,436,388,945,536	$95,769,928,012	9,013,765,613,339	36,644,026	$182,418,910,500	64,233,596,406,197	1.36%	0.11%	246,644	37,253,932
253	75,436,388,945,536	$95,859,656,433	9,083,624,489,491	37,027,106	$182,589,821,777	64,161,686,594,719	1.47%	0.11%	246,368	37,643,024
254	75,436,388,945,536	$95,949,381,923	9,153,634,596,797	37,027,106	$182,760,727,473	64,089,625,619,064	1.59%	0.11%	246,091	38,032,917
255	75,436,388,945,536	$96,039,665,899	9,223,412,842,721	37,410,903	$182,932,696,951	64,017,783,739,400	1.70%	0.11%	245,815	38,423,616
677	75,436,388,945,536	$302,705,664,211	39,860,488,768,613	211,205,958	$576,582,217,545	28,656,913,566,381	127.20%	2.08%	110,037	400,543,164
678	75,436,388,945,536	$308,934,775,436	40,001,551,446,187	212,416,780	$588,447,191,307	28,373,471,203,670	129.47%	2.27%	108,948	403,378,771
679	75,436,388,945,536	$315,884,655,145	40,148,700,645,521	213,652,519	$601,685,057,418	28,067,467,610,996	131.97%	2.50%	107,773	406,309,778
680	75,436,388,945,536	$323,724,095,367	40,302,835,816,932	214,916,058	$616,617,324,508	27,734,145,234,506	134.76%	2.79%	106,494	409,349,625
681	75,436,388,945,536	$332,684,472,279	40,465,093,462,003	216,210,954	$633,684,709,103	27,367,078,974,293	137.90%	3.15%	105,084	412,515,514
682	75,436,388,945,536	$343,093,208,523	40,636,945,973,795	217,541,692	$653,510,873,377	26,957,312,491,221	141.52%	3.62%	103,511	415,830,084
683	75,436,388,945,536	$355,431,827,614	40,820,360,358,304	218,914,065	$677,013,004,979	26,491,872,527,490	145.76%	4.24%	101,723	419,324,183
684	75,436,388,945,536	$370,442,858,877	41,018,067,296,565	220,335,792	$705,605,445,479	25,951,056,303,220	150.89%	5.12%	99,647	423,041,741
685	75,436,388,945,536	$389,341,718,940	41,234,049,037,438	221,817,564	$741,603,274,171	25,303,100,618,040	157.31%	6.42%	97,159	427,049,013
686	75,436,388,945,536	$414,277,614,873	41,474,503,608,337	223,374,931	$789,100,218,806	24,492,682,711,525	165.82%	8.51%	94,047	431,454,020
687	75,436,388,945,536	$449,466,101,449	41,749,980,178,669	225,032,041	$856,125,907,521	23,412,897,876,614	178.08%	12.26%	89,901	436,453,599
688	75,436,388,945,536	$504,479,079,313	42,080,918,568,790	226,829,906	$960,912,532,025	21,824,519,992,443	198.32%	20.24%	83,802	442,473,509
689	75,436,388,945,536	$606,478,881,111	42,515,854,619,116	228,847,822	$1,155,197,868,784	19,058,159,901,014	241.63%	43.30%	73,179	450,761,062
690	75,436,388,945,536	$868,979,107,743	43,220,852,435,568	231,273,737	$1,655,198,300,463	12,353,156,904,408	427.05%	185.43%	47,434	469,080,956
691	75,436,388,945,536	$2,480,122,262,934	45,593,180,237,984	234,749,654	$4,724,042,405,589	100,000	65107585195.35%	65107584768.29%	0	8,000,000,000
692	75,436,388,945,536	$1,614,747,707,176,710,000,000	75,436,388,945,536	244,670,143	$3,075,709,918,431,820,000,000	100,000	65107585195.35%	0.00%	0	HYPERDEFLATION

In this table, there is an assumption that 1 VIP$ = 1$ VIP = $1 U.S. in month 240 for easy comparisons. This might very well be the case, since no revaluations of the VIP$ are allowed for Phase I.

However, in Phase II, the VIP$ peg is frequently revalued in an attempt to maintain the market discount at 99% peg. There are no devaluations should the VIP$ fall below 99% peg. This is quickly corrected by a rapid increase in the dividend, treble arbitrage demand, and auctions for the Earth Dividend. Columns in the purple font are in VIP$.

With no more material land purchases, the number of non-banked VIP$ remains constant at 75.4 trillion VIP$.

Notice that the rent share to the Earth Dividend Subsidy Fund (EDSF) in the last month of Phase I (240) was about half the share in the first month of Phase II (241). Instead of supporting a land fund, all 75% of Phase II net rents go to the EDSF, doubling its take.

The current size of the EDSF and present value fund combined come next, with the total Earth Dividends issued in the following column. Phase II begins with only 32.6 million Earth Dividend holders, a far cry from 8 billion world population. Notice that no new Earth Dividends were issued in month 252 or month 254.

In these months, the 70 billion VIP$ circuit breaker kicked in. The difference between the combined EDSF and present value fund in months 250 and 251 was less than 70 billion VIP$, so no new Earth Dividends were awarded in month 252.

The next column is monthly ground rent. The advance rent account contains exactly 12 times this amount, or $2.17 trillion U.S. in month 240. Rent is held in VIP$ (as long as a discount to peg exists), but displayed in U.S. dollars.

The VIP$ Savings, Retail, and Treble Demand column describes much of what is actually happening. First, notice that this value in month 240 is 65.1 trillion VIP$. That is 72% of the world's currency! If that sounds like fantasy, consider that if the VIP economy during Phase I showed excess supply, more VIP$ would have been destroyed.

If that were so, the Total VIP$ Minus Bank column would be smaller by the same amount the VIP$ Savings, Retail, and Treble Demand column would be smaller. The VIP$ dividend would exceed a real return of 0.102% and hyperdeflation would occur even faster. The VIP$ Savings, Retail, and Treble Demand column represents the VIP economy in equilibrium.

Why then must the size of the VIP economy drop with deflation? In actuality, it might not, which would only cause more deflation. If investors refused to part with their VIP$, serious deflation would quickly set in.

However, with deflation, the VIP$ rises above 99% of peg. Notice the 0.11% deflation in month 241 would push the VIP$ to 99.11% of peg. The VIP$ dividend would drop to 4.9%. The lower dividend would drop demand for the VIP$. By month 245, there is no VIP$ dividend left. The VIP Treasury would then revalue the VIP$ by 0.57%, hopefully bringing the market value back to 99% of peg.

This revalued VIP$ is now worth more U.S. dollars than before. Merchants who accepted the VIP$ can now sell them at market for more. The column shows the declining equilibrium holdings of VIP$. If this does not occur, other forces will make it happen.

In particular, as the VIP$ starts to seriously deflate, reluctant sellers of land will change their mind. The VIP$ are too good to pass up. This will restore equilibrium at the level shown in the spreadsheet. Notice that a monthly deflation of 0.11% does not equal the 3.9% deflation required to support the present value of an

Earth Dividend. That caused the 70 billion VIP$ circuit breaker to kick-in twice during the first 15 months.

The cumulative VIP$ deflation in the first 15 months is rather benign. 1.70% leads to about 1.5% fiat currency inflation per year. The additional 0.24% fiat deflation during the year (0.02% x 12) brings the fiat currency inflation to under 1.3%. This is less than the 2% used throughout the [Phase I simulation].

The present value of an Earth Dividend goes from 250,000 VIP$ to 245,815 VIP$ over 15 months. Not a great difference, but notice that in month 255, 37.41 million Earth Dividends have been awarded, but 38.42 million could be awarded. The deflation has given us potential to award about a million more Earth Dividends. Not that impressive, but now skip ahead 35 years to month 677.

In month 677, monthly U.S. dollar inflation is 2.08%, or around 25% annually. That is serious, but perhaps not a crisis. The present value of an Earth Dividend is at most 110,037 VIP$ and there are over 189 million Earth Dividends in the bank (or given out to original members of Phase II communities, if they have not already received a dividend).

110,037 VIP$ is likely higher than the actual present value due to the shifting of productive resources into Earth Dividend services that occurred over the preceding 50 years. This benefit is not reflected in the table.

VIP$ in circulation are down to 28.66 trillion VIP$. However, these VIP$ buy 127.2% more in general merchandise than they did back in month 240. In fact, they have the same total general merchandise purchasing power as the 65.1 trillion VIP$ in month 240. For food, housing, education, and medical care, the purchasing power will be higher.

The deflation rate behaves exponentially. In Month 686, the monthly deflation rate is 8.51%. While this might be called hyperdeflation, revaluation of the peg is still possible. At this point, countries break down and desperately start selling their national parks and other government land into the commons trust. Reluctant private landowners break as well.

This gives deflation a break, but not a long one. Almost all of this money will find its way into auctions for the Earth Dividend and rent increases. If it temporarily pushes the VIP$ below 99% peg, the money will end up in treble arbitrage or hoarded by dividend-seeking investors.

As will be seen later, $10 trillion of new land sales in month 686 will push the next bout of hyperdeflation off by 50 months. However, if the land sales do not come until month 689, the hyperdeflation returns in 22 months. Once true hyperdeflation hits, purchasing all the remaining land in the world into the commons trust will have little if any effect.

By Month 690, the present value of an Earth Dividend is down to 47,434 VIP$. We can support 469 million Earth Dividends, but we have only awarded 231 million. The fiat currency inflation rate is 185.4% monthly or 2,225% annually. True VIP$ hyperdeflation begins. By month 691, we can support over 8 billion Earth Dividends. No sense in showing more, since that is the Earth's population.

Here is an aside that is important to remember. This is not a trick of currency. In order to get their hands on valuable VIP$, enterprises dramatically shift resources to service the Earth Dividend.

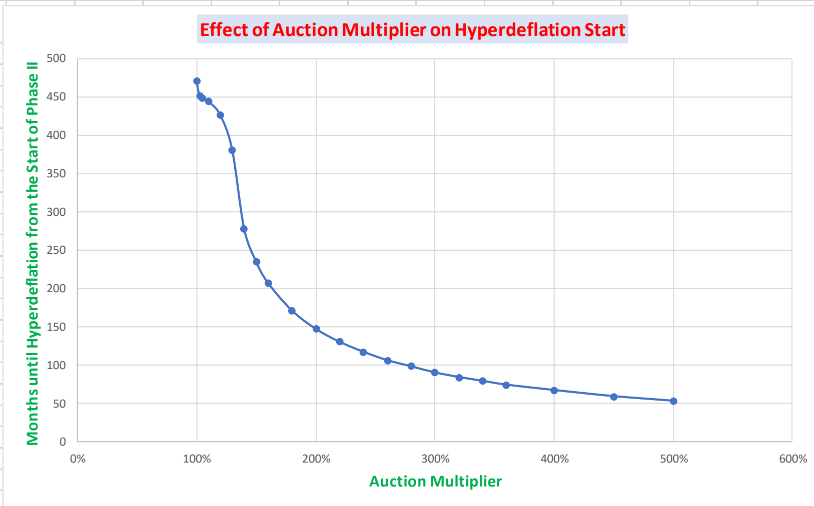
Things like space shuttle trips for billionaires, gold-plated anything, most of finance, luxury automobiles, travel, legacy education and healthcare systems, and other industries supported by fiat currency will either disappear or take a temporary back seat to providing food and shelter; police and fire protection; merit-based, backpack-funded education, self-insured HMOs, and a government and independent judiciary to protect our rights.

Don't worry. Once most of those 8 billion Earth Dividends are in place, the deflation will end and exciting innovations and adventures outside of the necessities will open to us all.

These graphs show how different values for various parameters and exogenous variables will change the first month of hyperdeflation from month 691:

Auction Multiplier

Auction Multiplier	Month of Hyperdeflation	Months after Phase II Begins
100%	711	471
102.63%	691	451
105%	689	449
110%	684	444
120%	666	426
130%	621	381
140%	518	278
150%	475	235
160%	447	207
180%	411	171
200%	387	147
220%	370	130
240%	357	117
260%	346	106
280%	338	98
300%	330	90
320%	324	84
340%	319	79
360%	314	74
400%	307	67
450%	299	59
500%	293	53



The optimal auction multiplier (before diminishing returns) would be near 180%. This would correspond to an average winning bid at 62% of present value if 50% of Earth Dividends were auctioned. If 100% of Earth Dividends were auctioned, the percentage of present value required would be the simpler formula 1/(1 – percent of present value) = 1.8 or 1 - 1/1.8 = present value bid = 44.4%.

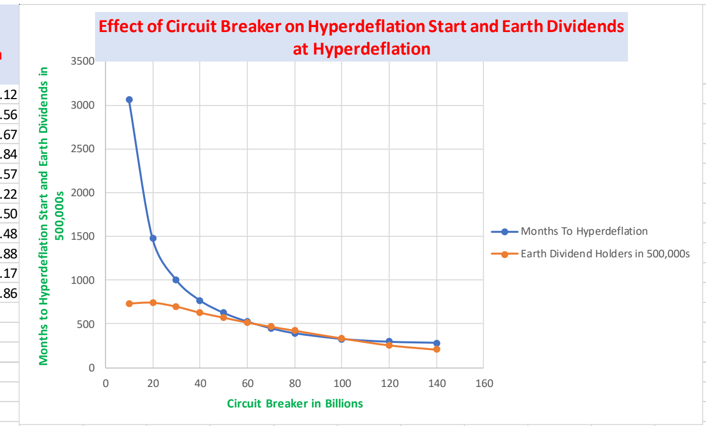
This table shows the portion of the $1,000/month Earth dividend that benefits people directly:

Phase II Personal Per Capita Monthly Earth Dividend in U.S. Dollars	
Food	242
Housing	404
Spending Cash	10
Cash (universal copay)	30
Education	51
Medical	111
TOTAL MONTHLY Earth Dividend	**$848**

The education distribution only will be a benefit to those who want to attend universities or trade schools, since K-12 is paid by legacy governments during Phase II. If education is counted, the maximum personal benefit is 84.8%. Paying 62% is a good deal, and paying 44.4% a great deal. The default of 5% is our conservative assumption.

Circuit Breaker

Circuit Breaker in Billions	Month of Hyperdeflation	Months after Phase II Begins	Earth Dividend Holders	Earth Dividend Holders in 500,000s
10	3308	3068	367,058,845	734.12
20	1716	1476	371,777,548	743.56
30	1243	1003	349,335,360	698.67
40	1009	769	314,920,617	629.84
50	867	627	286,784,679	573.57
60	767	527	258,608,363	517.22
70	691	451	234,749,654	469.50
80	634	394	212,741,048	425.48
100	568	328	168,439,888	336.88
120	536	296	129,084,652	258.17
140	524	284	104,428,814	208.86



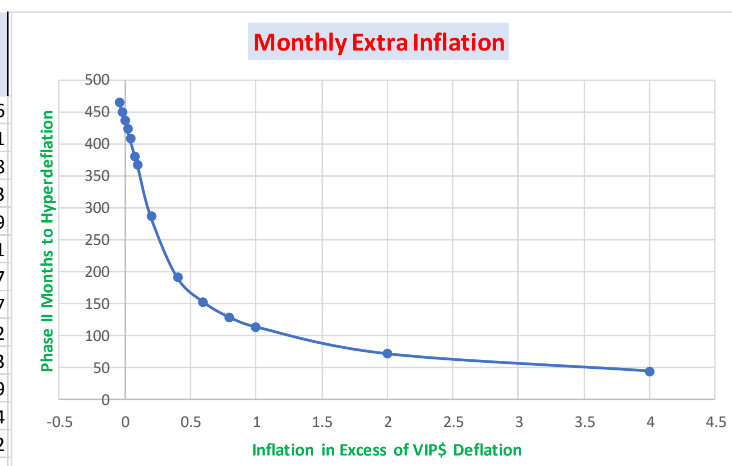
If the circuit breaker is low (at 10 billion), the number of years to hyperdeflation after Phase II begins is 255 (3068/12). In those 255 years, only 367 million Earth Dividends are awarded. A terrible inefficiency.

If the circuit breaker is at 70 billion, the number of years to hyperdeflation drops to 37 (451/12). In those 37 years, 235 million Earth Dividends are awarded. This turns out to be very near the optimal setting, as higher values of the circuit breaker trip too easily and leave long stretches of time without issuing Earth Dividends. The VIP Treasury can adjust this value as it sees fit.

U.S. Dollar Inflation Over and Above VIP$ Deflation

Extra U.S. dollar inflation over VIP$ deflation is an exogenous variable that the VIP Treasury cannot control. It is correlated with the amount of the economy spent on luxury goods and discretionary items. There will be high inflation in those areas as productive resources shift to service the Earth Dividend.

Monthly Extra Inflation	Month of Hyperdeflation	Months after Phase II Begins
-0.04	706	466
-0.02	691	451
0	678	438
0.02	663	423
0.04	649	409
0.08	621	381
0.1	607	367
0.2	527	287
0.4	432	192
0.6	393	153
0.8	369	129
1	354	114
2	312	72
4	285	45



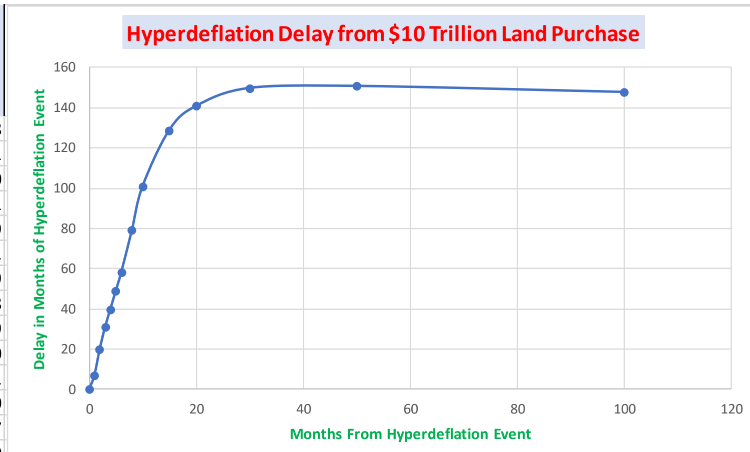
While we cannot control this number, the optimal value seems to be around 0.6% monthly, or 7.2% annual inflation.

Optimal Set

Overall, it would seem that the fastest and most efficient set of parameters and variables would be 180% auction multiplier, 70 billion VIP$ circuit breaker, and 0.6% monthly extra inflation. Using these parameters, hyperdeflation is reached 100 months after the start of Phase II, just over 8 years later.

Effect of Land Purchases on Delaying Hyperdeflation

Months From Hyperdeflation Event at Month 691	Month of New Hyperdeflation Event after Land Purchase	Months Hyperdeflation Delayed Due to Land Purchase
100	839	148
50	842	151
30	841	150
20	832	141
15	820	129
10	792	101
8	770	79
6	749	58
5	740	49
4	731	40
3	722	31
2	711	20
1	698	7
0	691	0



Property worth 10 trillion VIP$ is purchased into the commons trust a specified number of months before the deflation event at month 691. This delays the hyperdeflation event by so many months.

At 30 or more months out from the hyperdeflation, the delay is relatively constant around 150 months. As the land is purchased closer to the hyperdeflation event horizon, the delay becomes shorter. As the purchase gets closer and closer to the hyperdeflation horizon, the delay approaches zero. Once hyperdeflation begins, land purchases have no effect.

How the properties of the hyperdeflation event change the political landscape of the world is discussed in Phase II Monetary Policy.