# Hyperdeflation Scenarios



<u>Elsie hyperdeflation</u> happens during <u>ABC Phase II</u>. This is not conjecture but a law of nature; if everything is in Place A, it cannot also be in a different Place B. In our case, if all Elsies are <u>sequestered</u>, they cannot also be in circulation.

This alone is not enough for hyperdeflation. A second aspect is that people must demand Elsies. In our case, they are the ticket to a lifetime <u>Earth Dividend</u>, a winning lottery ticket.

This module studies the effects of various parameters on the timing of hyperdeflation. In the module <u>Phase II Monetary Policy</u>, this data will be used to explore effective monetary policy.

ABC Phase II begins when no more property owners are willing and able to sell their land into the <u>commons trust</u>. All obstacles are political (governments will not allow it, or the remaining sellers are too reluctant). There are no more "for sale" properties anywhere in the world where the jurisdiction has permitted the sale into a commons trust.

In the simulation, there are no more willing and able property sellers after the ABC purchases \$80 trillion of land into a commons trust during Phase I. The Phase II simulation begins in Month 240.

All <u>ground rent</u> that went to the <u>land account</u> will go to the Earth Dividend Subsidy Fund (<u>EDSF</u>) in Phase II. This fund receives 50% 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 <u>present value fund</u>. If the Earth Dividend was won at <u>auction</u>, auction proceeds are also transferred to the present value fund. Unlike the EDSF, the present value fund receives dividends.

#### **Global Variables and Parameters**

In Phase II, money sequestered in the present-value fund can only be released into circulation at £1,000/Earth Dividend Holder/Month. 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 <u>VIP Treasury</u> in response to exogenous variables. This simulation is different than the one found in the Phase II spreadsheet. It is a very different view of the same process. Yet, results are similar when parameters match those used in the Phase II spreadsheet.

The base model assumes no land is sold into the commons trust after the first month of Phase II depletes the land fund. However, in one graph, we see the effect of a \$10 trillion land purchase on delaying hyperdeflation based on the time to hyperdeflation. The model is based on a Phase I simulation used in version 6.0.

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 significant feature of the present value fund is Elsie sequestration, eliminating the possibility of investment income. Dividends on sequestered funds are less than 1%. Yet a 4% return is used to calculate the present value of an average Earth Dividend.

The source of this return is the <u>deflation</u> of the Elsie. It is assumed that the VIP Treasury will have an average annual deflation rate of 4% during Phase II before 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 must be 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 £ (<u>winners among</u> <u>high bidders chosen by lottery</u>), 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. An auction multiplier is multiplied by the <u>EDSF</u> 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, \$20,000 on average, which is highly conservative for a worldwide auction of Earth Dividends. (In the Phase II spreadsheet, 30% was assumed – auction multiplier = 121.43%)

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

The VIP Treasury does not control the monthly U.S. dollar inflation rate over Elsie deflation. Deflation in food, housing, medicine, education, and government services will be entirely or partially enjoyed by U.S. dollar consumers and 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 Elsie deflation to zero or more. It is a function of the composition of the basket of goods legacy governments use to measure inflation. Conservatively, a monthly U.S. dollar deflation rate of 0.02% (-0.02 inflation rate) is assumed by default. (The Phase II spreadsheet assumes a U.S. dollar inflation rate of 0.16%.)

The "Minimum Present Value Circuit Breaker" of 70 billion is entirely 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 ten months of Phase II, ten months in the middle, and the last nine months of Phase II before the onset of hyperdeflation:

Phase	II

				Supported		Elsie Savings, Retail and Treble			Present Value for	
				Earth		Demand			an Earth Dividend	Number of
	Total Elsies	Rent Share to Earth	EDSF + Present	Dividend	Monthly Ground	Month 240 =	Cumulative Elsie		Month 240 =	Supportable
Month	Month 240 = Parity	Dividend Subsidy Fund	Value Fund	Holders	Rent Revenue	Parity	Deflation	Monthly Deflation	Parity	Earth Dividends
240	75,436,388,945,536	\$140,861,861,284	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	\$135,417,008,569	8,275,671,566,490	33,210,239	\$180,556,011,425	64,994,045,241,943	0.17%	0.17%	249,564	33,189,407
242	75,436,388,945,536	\$135,626,489,214	8,389,415,512,468	33,751,907	\$180,835,318,952	64,876,949,605,638	0.36%	0.18%	249,114	33,733,841
243	75,436,388,945,536	\$135,844,582,189	8,502,937,828,829	34,294,413	\$181,126,109,586	64,759,937,801,679	0.54%	0.18%	248,665	34,280,137
244	75,436,388,945,536	\$136,063,737,280	8,616,238,559,568	34,837,792	\$181,418,316,373	64,643,130,589,489	0.72%	0.18%	248,217	34,828,302
245	75,436,388,945,536	\$136,283,705,393	8,729,317,486,244	35,382,047	\$181,711,607,190	64,526,532,173,008	0.90%	0.18%	247,769	35,378,346
246	75,436,388,945,536	\$136,504,480,510	8,842,174,380,742	35,927,182	\$182,005,974,014	64,410,142,876,628	1.08%	0.18%	247,322	35,930,276
247	75,436,388,945,536	\$136,726,064,744	8,954,809,013,720	36,473,199	\$182,301,419,659	64,293,962,895,910	1.27%	0.18%	246,876	36,484,101
248	75,436,388,945,536	\$136,948,460,473	9,067,221,154,872	37,020,104	\$182,597,947,297	64,177,992,423,098	1.45%	0.18%	246,431	37,039,829
249	75,436,388,945,536	\$137,171,670,078	9,179,410,572,922	37,567,898	\$182,895,560,103	64,062,231,651,373	1.63%	0.18%	245,986	37,597,470
250	75,436,388,945,536	\$137,395,695,932	9,291,377,035,611	38,116,584	\$183, 194, 261, 243	63,946,680,775,011	1.82%	0.18%	245,542	38,157,030
414	75,436,388,945,536	\$186,042,083,866	24,397,350,860,507	142,818,857	\$248,056,111,822	48,062,364,743,169	35.46%	0.21%	184,550	163,136,229
415	75,436,388,945,536	\$186,403,231,092	24,467,356,977,448	143,563,025	\$248,537,641,457	47,986,580,270,608	35.68%	0.21%	184,259	164,147,867
416	75,436,388,945,536	\$186,764,736,830	24,537,050,580,843	144,308,638	\$249,019,649,106	47,911,102,575,420	35.89%	0.21%	183,969	165,163,064
417	75,436,388,945,536	\$187,126,582,595	24,607,177,375,684	144,308,638	\$249,502,110,126	47,835,186,248,336	36.11%	0.22%	183,677	166,181,842
418	75,436,388,945,536	\$187,492,727,049	24,676,993,672,942	145,057,144	\$249,990,302,733	47,759,511,639,803	36.32%	0.22%	183,387	167,204,231
419	75,436,388,945,536	\$187,859,579,811	24,747,248,454,476	145,057,144	\$250,479,439,748	47,683,387,214,088	36.54%	0.22%	183,095	168,230,255
420	75,436,388,945,536	\$188,230,856,000	24,817,195,232,992	145,808,583	\$250,974,474,666	47,607,500,016,550	36.76%	0.22%	182,803	169,259,947
421	75,436,388,945,536	\$188,602,893,303	24,887,585,979,161	145,808,583	\$251,470,524,404	47,531,156,673,524	36.98%	0.22%	182,510	170,293,330
422	75,436,388,945,536	\$188,979,455,955	24,957,671,342,661	146,562,994	\$251,972,607,939	47,455,046,307,601	37.20%	0.22%	182,218	171,330,438
423	75,436,388,945,536	\$189,356,833,165	25,027,450,407,181	147,318,912	\$252,475,777,553	47,379,229,207,717	37.42%	0.22%	181,927	172,371,279
424	75,436,388,945,536	\$189,734,689,865	25,097,679,332,368	147,318,912	\$252,979,586,487	47,302,954,575,328	37.64%	0.22%	181,634	173,415,879
621	75,436,388,945,536	\$552,056,700,245	41,201,784,324,287	330,846,593	\$736,075,600,327	25,401,697,417,326	156.31%	7.38%	97,537	542,360,767
622	75,436,388,945,536	\$592,703,989,454	41,517,500,793,625	333,054,820	\$790,271,985,939	24,435,624,320,645	166.45%	10.13%	93,828	548,677,696
623	75,436,388,945,536	\$652,646,544,108	41,893,249,992,388	335,425,636	\$870, 195, 392, 144	23,100,794,247,416	181.84%	15.40%	88,702	556,035,406
624	75,436,388,945,536	\$752,997,318,750	42,370,732,032,353	338,036,222	\$1,003,996,425,000	21,017,699,813,179	209.78%	27.93%	80,704	565,365,797
625	75,436,388,945,536	\$963,186,724,333	43,063,496,335,196	341,048,211	\$1,284,248,965,777	16,961,905,021,020	283.85%	74.07%	65,130	580,154,410
626	75,436,388,945,536	\$1,676,435,373,109	44,492,386,293,958	344,900,958	\$2,235,247,164,145	4,121,036,681,841	1479.88%	1196.04%	15,824	686,097,324
627	75,436,388,945,536	\$21,726,899,404,519	66,701,408,965,423	351,606,700	\$28,969,199,206,025	100,000	65107585195.35%	65107583715.46%	0	8,000,000,000
628	75,436,388,945,536	****	75,436,388,945,536	438,514,297	****	100,000	65107585195.35%	0.00%	0	HYPERDEFLATION
629	75,436,388,945,536	****	75,436,388,945,536	8,000,000,000	*****	100,000	65107585195.35%	0.00%	0	HYPERDEFLATION

In this table, there is an assumption that E1 = 1 E = 1 U.S. in month 240 for easy comparisons. This should be the case since no revaluations of the Elsie are allowed for Phase I.

However, in Phase II, the <u>Elsie peg is frequently revalued</u> to maintain the <u>market</u> <u>discount</u> at 99% of the peg. Should the Elsie fall below 99% of the peg, there are no devaluations. This is quickly corrected by a rapid increase in the <u>dividend</u>, <u>treble</u> <u>arbitrage demand</u>, and auctions for the Earth Dividend. Columns in the purple font are in Elsies.

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 <u>land fund</u>, all 50% of Phase II 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 32.65 million Earth Dividend holders, a far cry from the 8 billion world population. (The Phase II assumption in the spreadsheet simulation is 17.5 million Earth Dividends.) Notice that no new Earth Dividends were issued in month 252 or month 254.

Note the doubling up of supported Earth Dividend holders starting in Month 416.

In these months, the 70 billion Elsie circuit breaker kicked in. The difference between the combined EDSF and present value fund in months 416 and 417 was less than £70 billion, so no new Earth Dividends were awarded in month 417.

The next column is the monthly ground rent at \$180.6 billion. The advance rent account contains 12 times this amount, or \$2.17 trillion U.S., in month 240. This is almost identical to the results of version 7.0 of Phase I simulation.

The Elsie Savings, Retail, and Treble Demand column describes much of what is happening. First, notice that this value in month 240 is £65.1 trillion. That is 72% of the world's currency! If that sounds like fantasy, consider that if the VIP economy during <u>Phase I</u> showed excess supply, more Elsies would have been destroyed. (The Phase 1 simulation for version 7.0 ends with £50.6 trillion.)

The Elsie dividend would exceed a real return of 0.102%, and hyperdeflation would occur even faster. The Elsie Savings, Retail, and Treble Demand column represents the VIP economy in equilibrium.

Why must the size of the VIP economy drop with deflation? It might not, which would only cause more deflation. Severe deflation would quickly occur if investors refused to part with their Elsies.

However, with deflation, the Elsie rises above 99% of the peg. Notice that the 0.11% deflation in month 241 would push Elsie to 99.17% of the peg. Once the percent of the peg exceeds 99.57%, the VIP Treasury would revalue the Elsie by 0.57%, hopefully bringing the market value back to 99% of the peg.

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

As the Elsie seriously deflates, reluctant land sellers will change their minds. The Elsies 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 4% deflation required to support the present value of an Earth Dividend.

The cumulative Elsie deflation in the first ten months is relatively benign. 1.80% leads to about 2.1% 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

1.9%. This is less than the 2% used throughout the <u>Phase I simulation</u>. (In the 7.0 simulation, 2% is added to the 1.5%, bringing total fiat currency inflation to 4.1%).

The present value of an Earth Dividend goes from E250,000 to E245,815 over 15 months. There is no significant difference, but in month 250, 38.12 million Earth Dividends have been awarded, but 38.16 million could be granted. The deflation has given us the potential to award about a million more Earth Dividends. It is not that impressive, but now skip 31 years to month 626. (The 7.0 simulation starts Phase II with a E400,000 present value.)

In month 621, monthly U.S. dollar inflation is 7.38% or around 88.56% annually. That is on the verge of a crisis. The present value of an Earth Dividend is, at most, 97,537, and over 330.8 million Earth Dividends awarded.

£97,537 is likely higher than the actual present value due to the shifting of productive resources into Earth Dividend services over the preceding 50 years. This benefit is not reflected in the table.

Elsies in circulation are down to £25.4 trillion. However, these Elsies buy 256.31% more in general merchandise than in month 240. They have the same total general merchandise purchasing power as the £75 trillion in month 240. The purchasing power will be higher for food, housing, education, and medical care.

The deflation rate behaves exponentially. In Month 625, the monthly deflation rate is 74.07%. Although this is 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 this money will find its way into auctions for the Earth Dividend and rent increases. If it temporarily pushes the Elsie below 99% of the peg, the money will end up in treble arbitrage or hoarded by dividend-seeking investors.

As will be seen later, E10 trillion new land sales in month 621 will push the next bout of hyperdeflation by 49 months. However, if the land sales do not come until month 625, the hyperdeflation returns in 7 months. Once hyperdeflation hits, purchasing all the remaining land in the world into the commons trust will have little effect. By Month 626, the present value of an Earth Dividend is down to £15,824. We can support 686 million Earth Dividends but have only awarded 345 million. The fiat currency inflation rate is over 10,000% annually. This is Elsie hyperdeflation. By month 627, 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. To get their hands on valuable Elsies, enterprises dramatically shift resources to service the Earth Dividend.

Things like space shuttle trips for billionaires, gold-plated anything, most 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 provide food and shelter; police and fire protection; <u>merit-based</u>, <u>backpack-funded education</u>, <u>self-insured HMOs</u>, and a <u>government</u> and <u>independent judiciary</u> to protect our rights.

Once most of those 8 billion Earth Dividends are in place, the <u>deflation</u> will end, and exciting innovations and adventures outside 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 626:



### **Auction Multiplier**

The optimal auction multiplier (before diminishing returns) would be near 130%. This would correspond to an average winning bid at 38% of present value if 50% of Earth Dividends were auctioned. This is slightly more than the 30% of the present value assumed in the 7.0 Phase II simulation.

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 will only benefit those who want to attend universities or trade schools since legacy governments pay for K-12 during Phase II. If education is counted, the maximum personal benefit is 84.8%. Paying 38% is a good deal, and paying 30% is excellent. The default of 5% in this simulation is a very 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	Effect of Circuit Breaker on Hyperdeflation Start and Earth Dividends at Hyperdeflation
10	1844	1604	606,875,012	1,213.75	1400
20	1101	861	560,344,700	1,120.69	<b>H B</b> 1200
30	883	643	507,493,948	1,014.99	
40	776	536	457,278,953	914.56	
50	711	471	420,370,848	840.74	🚆 🚆 Months To Hyperdeflation
60	662	422	380,240,872	760.48	Earth Dividend Holders in 500,000s
70	626	386	346,344,346	692.69	Ž 2 400
80	593	353	316,947,995	633.90	200
100	537	297	264,882,789	529.77	
120	488	248	221,392,438	442.78	<b>Š</b> 0 20 40 60 80 100 120 140 160
140	456	216	178,806,617	357.61	Circuit Breaker in Billions

If the circuit breaker is low (at 10 billion), the number of years to hyperdeflation after Phase II begins is 133 (1604/12). In those 133 years, only 607 million Earth Dividends are awarded—a terrible inefficiency.

If the circuit breaker is at 70 billion, the number of years to hyperdeflation drops to 32 (386/12). In those 32 years, 346 million Earth Dividends are awarded. This turns out to be very near the optimal setting, as higher values of the circuit breaker trip too quickly and leave long periods without issuing Earth Dividends. The VIP Treasury can adjust this value as it sees fit.

#### U.S. Dollar Inflation Over and Above Elsie Deflation

Extra U.S. dollar inflation over Elsie 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. Those areas will have high inflation as productive resources shift to service the Earth Dividend.



While we cannot control this number, the optimal value (without diminishing returns) seems to be around 0.3% monthly or 3.6% annual inflation. The default value in this simulation of -0.02 is likely too low, which is why the simulation lasts so much longer than the 7.0 Phase II simulation, which uses a value of 0.16%.

# **Effect of Land Purchases on Delaying Hyperdeflation**



Property worth £10 trillion is purchased into the commons trust a specified number of months before the deflation event at month 626. This delays the hyperdeflation event by so many months.

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

How the properties of the hyperdeflation event change the world's political landscape is discussed in <u>Phase II Monetary Policy</u>.

# **Optimal Set**

Overall, the fastest and most efficient set of parameters and variables would be a 130% auction multiplier, £70 billion circuit breaker, and 0.6% monthly extra inflation. Using these parameters, hyperdeflation is reached 100 months after the start of Phase II, just over eight years later.

The implementers of Phase II at the VTLM will look at multiple simulations with various assumptions to determine the optimal monetary policy.