The goal of this prototype is to visualize and test the overall store and mine economy in ‘To the Depths’.

# 1st Version:

## Image:

A diagram of a stash

AI-generated content may be incorrect.

## Variables:

Chance for Ore – Determines the odds for getting ore each time the Player entered the cave. (currently set to 70%)

Risk – Determines the odds of getting killed each time the Player entered the cave. (Currently set to 10%)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash when Player leaves cave)

## Description:

This version shows a basic visualization of the main tap of the economy, it does not have any sinks or levers to put any of the resources into. There is also no reason to send transfer the stash into money making this version of the economy broken.

# 2nd Version:

## A computer screen shot of a diagram AI-generated content may be incorrect.Image:

## Variables:

Chance for Ore – Determines the odds for getting ore each time the Player entered the cave. (currently set to 70%)

Risk – How much risk the Player has accumulated during their mining. (Acts as a pool, increases each time chance of risk succeeds, gets emptied when Player leaves cave, triggers game over when it becomes greater then Max Risk)

Risk Chance - Determines the odds of getting killed each time the Player entered the cave. (Currently set to 10%)

Max Risk – The max capacity for Risk before the Player loses. (Currently set to 5)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash when Player leaves cave)

## Description:

Fairly similar to the previous version, though it now doesn’t immediately fail after triggering risk once and the leave cave option now acts as a sink for Risk. Still contains the same issue of not properly showcasing the economy.

# 3rd Version:

## A diagram of a diagram AI-generated content may be incorrect.Image:

## Variables:

Chance for Ore – Determines the odds for getting ore each time the Player mines, chance increases depending on the amount of stash the Player has. (Base of 50%, increase by 15% per unit of Stash, no max capacity)

Risk – How much risk the Player has accumulated during their mining. (Acts as a pool, increases each time chance of risk succeeds, gets emptied when Player leaves cave, triggers game over when it becomes greater than Max Risk)

Risk Chance - Determines the odds of getting killed each time the Player mines, chance increases depending on the amount of stash the Player has. (Base of 5%, increases by 5% per 2 units of stash, no max capacity)

Max Risk –The max capacity for Risk before the Player loses. (Currently set to 10)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash when Player leaves cave)

## Description:

A much better representation of the mining aspect in the economy as it now showcases the relationship between risk and mining. Compared to the previous version, chance of ore and risk now increases as the Player stash giving the choice of either continuing their streak to get even more ore but with a higher chance of risk or cashing out to reset their risk. While this does give some reason to leave the cave, there is still no real sink or lever that money can be used for making it worthless to the Player.

# 4th Version:

## Image:

## Variables:

Base Chance – The base odds for getting ore each time the Player mines, chance increases depending on the amount of stash the Player has. (Starts at 50%, increase by Bonus Chance per unit of Stash, no max capacity)

Bonus Chance - Determines how much Base Chance will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be increased when purchasing Mining Bonus. (Base of 15, is increased by 15 each time Mining Bonus is purchased)

Total Risk – How much risk the Player has accumulated during their mining. (Acts as a pool, increases each time chance of risk succeeds, gets emptied when Player leaves cave, triggers game over when it becomes greater than Max Risk)

Base Risk - Determines the odds of getting killed each time the Player mines, chance increases depending on the amount of Stash the Player has. (Base of 5%, increases by Bonus Risk per 2 units of stash, no max capacity)

Max Risk – The max capacity for Total Risk before the Player loses. (Currently set to 10)

Bonus Risk – Determines how much Base Risk will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be reduced when purchasing Risk Reduction. (Base of 15, can get reduced by 2 each time Risk Reduction is purchased)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash when Player leaves cave)

Price of Mining Bonus – Determines how much Money the Player needs to purchase Mining Bonus, is doubled each time Mining Bonus is purchased. (Starts at 30, increases by 100% each time Mining Bonus is purchased)

Price of Risk Reduction - Determines how much Money the Player needs to purchase Risk Reduction, is doubled each time Risk Reduction is purchased. (Starts at 20, increases by 100% each time Risk Reduction is purchased)

## Description:

An overall great improvement from the previous version due to the addition of actual levers for Money; first lever is the Mining Bonus that increases bonus chance by 15, second lever is the Risk Reduction that reduces Bonus Risk by 2; Both levers contribute to extending mining runs and massively increasing the output. This was also the first version that was playtested. Playtesters felt that the economy was fun to play with but the price increases for the upgrades removed the value of money; this is because when Players focused on specific upgrades, it always took them three trips into the mine to get the next upgrade no matter how much extra ore they were getting which essentially inflated Money reducing it’s worth. Two solutions to this could be to reduce the price increase for both upgrades and possibly adding a sink that the has to put money into that increases overtime.

# 5th Version:

## Image:

## Variables:

Base Chance – The base odds for getting ore each time the Player mines, chance increases depending on the amount of stash the Player has. (Starts at 50%, increase by Bonus Chance per unit of Stash, no max capacity)

Bonus Chance - Determines how much Base Chance will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be increased when purchasing Mining Bonus. (Base of 20, is increased by each time Mining Bonus is purchased)

Total Risk – How much risk the Player has accumulated during their mining. (Acts as a pool, increases each time chance of risk succeeds, gets emptied when Player leaves cave, triggers game over when it becomes greater than 0)

Base Risk - Determines the odds of getting killed each time the Player mines, chance increases depending on the amount of Stash the Player has. (Base is randomly changes between 1-20%, increases by Bonus Risk\*(Stash/2), no max capacity)

Max Risk – The max capacity for Total Risk before the Player loses. (Base of 10, increases by 2 each time Risk Reduction is purchased.)

Bonus Risk – Determines how much Base Risk will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be reduced when purchasing Risk Reduction. (Base of 20, gets reduced by 3 then increased by 1 each time Risk Reduction is purchased giving it a minimum of 1 since it can’t go into negatives.)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash when Player leaves cave)

Price of Mining Upgrade – Determines how much Money the Player needs to purchase Mining Bonus, is increased each time Mining Bonus is purchased. (Starts at 30, increases by 60% each time Mining Upgrade is purchased)

Price of Risk Reduction - Determines how much Money the Player needs to purchase Risk Reduction, is increased each time Risk Reduction is purchased. (Starts at 20, increases by 80% each time Risk Reduction is purchased)

Debt Due – Determines how much Money the Player needs to pay off their debt, is doubled each time the Debt is paid off.

Days left to Pay Debt – Determines how many Days the Player has to pay off their debt, decreases each time the Player leaves the cave, increases each time the Player pays off their debt. Upon reaching zero, it triggers a game over. (Starts at 6, decreases by 1 each time the Player leaves the cave, increases by 4 each time the Player pays off their Debt Due)

Days Survived – Tracks how many Days the Player has survived as a sort of scoreboard, increases each time the Player leaves the cave. (Acts as a pool, increases each time the Player leaves the cave)

## Description

The best current representation of the economy in ‘To The Depths’, thanks to how there is now a sink that the Player has to put their Money into in order to keep Playing resulting in a bigger incentive to mine and get ore. The new day system also makes leaving the mine more of a difficult choice as you may not be able to gain enough money the next day to pay off the debt. The balance changes to the upgrade and base risk also make the game feel more difficult and encourages careful choices, it also mitigates inflation of Money. This was the second version that was playtested; Playtesters enjoyed using the system and making choices between days. The only issue was that the layout was confusing at first though it did start making more sense as they played with the system, another issue was that some of the values felt too high and could probably be reduced; another issue was that death wasn’t really showcased accurately as it causes the game to end when it should allow the Player to keep going.

# 6th Version:

## Image:

## Variables:

Base Chance – The base odds for getting ore each time the Player mines, chance increases depending on the amount of stash the Player has. (Starts at 50%, increase by Bonus Chance \* (Stash \* random number between 0.2 to 2.2), no max capacity)

Bonus Chance - Determines how much Base Chance will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be increased when purchasing Mining Bonus. (Base of 20, is increased by 20 each time Mining Bonus is purchased, no max capacity)

Total Risk – How much risk the Player has accumulated during their mining. (Acts as a pool, increases each time chance of risk succeeds, gets emptied when Player leaves cave, triggers death when it becomes greater than Risk Limit, death cause the Player to lose all of their money, stash and skips one day)

Base Risk - Determines the odds of getting killed each time the Player mines, chance increases depending on the amount of Stash the Player has. (Base is randomly changes between 1-20%, increases by Bonus Risk\*(Stash/random number between 1.5 to 3), no max capacity)

Risk Limit – The max capacity for Total Risk before the Player dies. (Base of 10, increases by 2 each time Risk Reduction is purchased.)

Bonus Risk – Determines how much Base Risk will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be reduced when purchasing Risk Reduction. (Base of 20, gets reduced by 3 then increased by 1 each time Risk Reduction is purchased giving it a minimum of 1 since it can’t go into negatives.)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash \* Ore Value when Player leaves cave, is fully lost on death)

Price of Mining Upgrade – Determines how much Money the Player needs to purchase Mining Bonus, is increased each time Mining Bonus is purchased. (Starts at 30, increases by 60% each time Mining Upgrade is purchased)

Price of Risk Reduction - Determines how much Money the Player needs to purchase Risk Reduction, is increased each time Risk Reduction is purchased. (Starts at 20, increases by 80% each time Risk Reduction is purchased)

Quota – Determines how much Money the Player needs to pay to fulfill their quota, is doubled each time the quota is filled. (Starts at 50, increases by 100% each time quota is fulfilled)

Days left to Fulfill Quota – Determines how many Days the Player has to fulfill their quota, decreases each time the Player leaves the cave or dies, increases each time the Player pays off their debt. Upon reaching zero, it triggers a game over. (Starts at 6, decreases by 1 each time the Player leaves the cave, increases by 4 each time the Player pays off their Debt Due)

Days Survived – Tracks how many Days the Player has survived as a sort of scoreboard, increases each time the Player leaves the cave. (Acts as a pool, increases each time the Player leaves the cave)

Value Upgrade – Increases the value of ore when ending the day by 50%.

Price of Value Upgrade – Determines how much Money the Player needs to purchase Value Upgrade, is increased each time Value Upgrade is purchased. (Starts at 75, increases by 150% each time Value Upgrade is purchased)

Bonus Value – How much Ore Value gets increased by 50%.

Ore Value – How much Money the Player gets per Stash when ending the day. (Starts at 50%, increases by 50% per Bonus Value)

## Description:

A more balanced and accurate version of the previous version of the economy. Contains a more accurate version of the game’s death system, it now just forces the day to end and takes all of the Player’s money rather than end the game. Also added more randomization to reduce the Player’s ability to predict the outcome from mining. On top of that, also added a new ‘Value Upgrade’ available for purchase to give the Player more agency with their money. Also reduced the starting value of the Quota. Playtests have shown that while not resetting when dead is nice, it does result in the balancing being too skewed towards the Player’s favour; at a certain point, the Player will never be able to fail because they are making too much money and it’s too easy to avoid death. The new upgrade was also way too powerful for the price and made failure even more improbable. To fix this, the random number for the Ore chance and Risk Chance should be harsher with lower minimums and maximums. Another fix is to the prices and change in prices, base prices should be slightly decreased and the price changes should be higher. The mining upgrade should also be nerfed a little as it’s benefit is way too strong.

# 7th Version:

## A diagram of a network AI-generated content may be incorrect.Image:

## Variables:

Base Chance – The base odds for getting ore each time the Player mines, chance increases depending on the amount of stash the Player has. (Starts at 50%, increase by Bonus Chance \* (Stash \* random number between 0.3 to 1.8), no max capacity)

Bonus Chance - Determines how much Base Chance will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be increased when purchasing Mining Bonus. (Base of 20, is increased by 5 each time Mining Bonus is purchased, no max capacity)

Total Risk – How much risk the Player has accumulated during their mining. (Acts as a pool, increases each time chance of risk succeeds, gets emptied when Player leaves cave, triggers death when it becomes greater than Risk Limit, death cause the Player to lose all of their money, stash and skips one day)

Base Risk - Determines the odds of getting killed each time the Player mines, chance increases depending on the amount of Stash the Player has. (Base is randomly changes between 5-30%, increases by Bonus Risk\*(Stash/random number between 1.8 to 3.4), no max capacity)

Risk Limit – The max capacity for Total Risk before the Player dies. (Base of 10, increases by 4 each time Risk Reduction is purchased.)

Bonus Risk – Determines how much Base Risk will be increased according to the Player’s Stash, is divided by 100 before being added to turn it into a decimal. Can be reduced when purchasing Risk Reduction. (Base of 20, gets reduced by 3 then increased by 1 each time Risk Reduction is purchased giving it a minimum of 1 since it can’t go into negatives.)

Stash – The value of loot the Player has before leaving the cave. (Acts as a pool, increases each time chance of ore succeeds)

Money – The total amount of money the Player has. (Acts as a pool, takes in value of current stash \* Ore Value when Player leaves cave, is fully lost on death)

Price of Mining Upgrade – Determines how much Money the Player needs to purchase Mining Bonus, is increased each time Mining Bonus is purchased. (Starts at 25, increases by 40% each time Mining Upgrade is purchased)

Price of Risk Reduction - Determines how much Money the Player needs to purchase Risk Reduction, is increased each time Risk Reduction is purchased. (Starts at 20, increases by 75% each time Risk Reduction is purchased)

Quota – Determines how much Money the Player needs to pay to fulfill their quota, is doubled each time the quota is filled. (Starts at 60, increases by 80% each time quota is fulfilled)

Days left to Fulfill Quota – Determines how many Days the Player has to fulfill their quota, decreases each time the Player leaves the cave or dies, increases each time the Player pays off their debt. Upon reaching zero, it triggers a game over. (Starts at 6, decreases by 1 each time the Player leaves the cave, increases by 4 each time the Player pays off their Debt Due)

Days Survived – Tracks how many Days the Player has survived as a sort of scoreboard, increases each time the Player leaves the cave. (Acts as a pool, increases each time the Player leaves the cave)

Value Upgrade – Increases the value of ore when ending the day by 20%.

Price of Value Upgrade – Determines how much Money the Player needs to purchase Value Upgrade, is increased each time Value Upgrade is purchased. (Starts at 70, increases by 150% each time Value Upgrade is purchased)

Bonus Value – How much Ore Value gets increased by 20%.

Ore Value – How much Money the Player gets per Stash when ending the day. (Starts at 60%, increases by 20% per Bonus Value)

## Description:

A more balanced version of the previous version. Based on playtests, the randomness of the chances has been made more generally harsher to increase the odds of the Player having to make harder choices. Have also massively reduced the amount of Ore Value that the Player gets with each upgrade. Mining Upgrade has also been massively nerfed to reduced its effectiveness and encourage more careful planning. Inhouse playtests have shown the new balancing makes the game much more difficult but doesn’t feel impossible, every failure felt avoidable in some way.

[Link to Current Version](https://my.machinations.io/d/to-the-depths-economy-demo/258daf98fc3611efabac028ecffc1261)