

# Umbrella Coin: Peer-to-Peer Benefit Payouts

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## Abstract

The Umbrella Coin (UMC) team is building a next generation model for providing risk management for individuals and businesses. Our solution will be built on a decentralized, blockchain platform to avoid the fees and management costs associated with traditional insurance companies. We are aiming to have UMC tokens augment standard insurance policies such as life/health (L/H) and property/casualty (P/C). Total net premiums for L/H and P/C insurers was approximately 1.2 trillion in the United States alone in 2015<sup>3</sup>. Juxtapose net premiums with the total profits, approximately 100 billion<sup>4</sup>, and there is a clear opportunity for the insured to cut out middle men and stop overpaying for coverage. Furthermore, policyholder's requirement to pay a deductible and other hidden costs imposes an even greater overhead when attempting to make insurance claims. Our goal is to make UMC viable for standard benefit payouts and later expand to full insurance policies.

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<sup>3</sup> <http://www.iii.org/fact-statistic/industry-overview>

<sup>4</sup> [https://www.treasury.gov/initiatives/fio/reports-and-notice/Document/2016\\_Annual\\_Report.pdf](https://www.treasury.gov/initiatives/fio/reports-and-notice/Document/2016_Annual_Report.pdf)

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## 2 INSURANCE

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Figure 1. Car Insurance Premiums by age<sup>5</sup>

An insurance policy is a financial contract by which the buyer is protected from financial responsibility in the case of an emergency or unexpected life-event. There is a litany of items that can be insured under a given policy including homes, automobiles, health care, or personal goods. While offering peace of mind and a safeguard against risk for policyholders, insurance is a boon for insurers. Warren Buffett, famous investor and CEO of Berkshire Hathaway, referred to insurance as Berkshire's "most important sector" in his latest letter to shareholders<sup>6</sup>. Clearly, there are strides to be made for policyholders to retain their value.

This burden is shared worldwide with 10 of the 18 largest insurance companies in the world being headquartered in other countries, including Japan, Germany, China and the UK.<sup>7</sup>

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<sup>5</sup> <https://www.valuepenguin.com/average-cost-of-insurance>

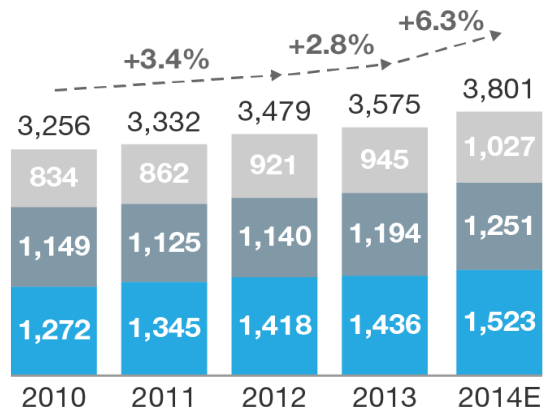
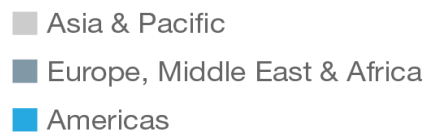
<sup>6</sup> <http://www.berkshirehathaway.com/letters/2016ltr.pdf>

<sup>7</sup> [http://www.propertycasualty360.com/2016/08/24/18-pc-insurance-companies-make-the-2016-fortune-gl?slreturn=1499729987&page=5&page\\_all=1](http://www.propertycasualty360.com/2016/08/24/18-pc-insurance-companies-make-the-2016-fortune-gl?slreturn=1499729987&page=5&page_all=1)

# Global insurance premiums beat GDP growth in 2014 for first time in 5 years, with Health and Life as the primary drivers.

Premiums in € billion,<sup>1</sup> CAGR in percent

## Total insurance

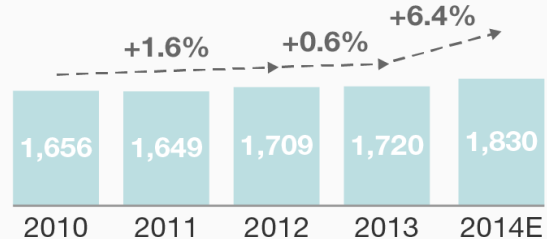


## Nominal GDP

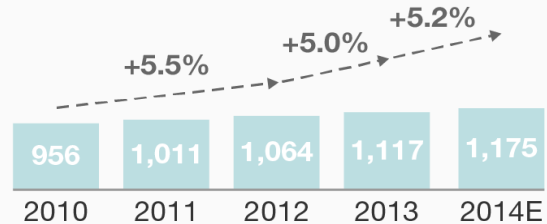
Growth %



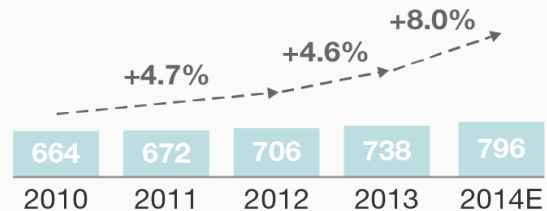
## Life



## P&C



## Health



<sup>1</sup>2014 based on available H1 or Q3 reporting; at fixed exchange rates 2013.

McKinsey&Company | Source: McKinsey Global Insurance Pools

Source: McKinsey<sup>8</sup>

## 2.1 MIDDLE-MEN

Many insurance policies are sold via an agent or broker. These agents are licensed to sell insurance in certain states or territories and make commission on their sale of insurance. The cost of their sale is passed on to the policyholder. While we believe that the profit insurers make off policyholders is

<sup>8</sup> <http://www.mckinsey.com/industries/financial-services/our-insights/global-insurance-insights-a-detailed-analysis-of-trends-that-shape-the-industry>

absurd, additional parties gaining a profit even further reduces the cost/value ratio of purchasing a policy.

UMC solves this by allowing “policyholders” (or really, coin holders), to bypass the overhead of purchasing through agents and instead purchase from other coin holders.

## **2.2 HIGH PREMIUMS**

As illustrated by figure 1, insurance is sold based on the perceived risk of the policyholder. Actuaries are responsible for assessing the risk factors of a policyholder and determining an acceptable rate for the policyholder. Based on perceived risk, or previous insurance claims, policyholders may be viewed as a greater liability and forced to pay more. Of course, in the event they do not make a claim, their premium is considerable profit for the insurance agency with no monetary gain for the policyholder. As time goes on, rates increase for car insurance and life insurance as you are perceived to be more risk. Furthermore, if a policyholder makes a claim for P/C, their rates will inevitably increase to offset the risk they are perceived to have.

## **2.3 DECENTRALIZED CENTRALIZATION**

Most interestingly about the current insurance model is the funding source and revenue. Insurance companies pool money from policyholder premiums and invest into commodities like stocks, bonds, precious metals, and perhaps even cryptocurrency. Insurance companies therefore collect the growth and interest on policyholder money instead of the policyholder themselves. Couple this with potentially high premiums outlined above and policyholders stand to lose on both their premium costs and what they would have collected in interest. The pooling model from all policyholders essentially causes the insurance industry to crowdfund funds needed to pay claims while simply operating as overhead for the funds. Insurance companies are reduced to glorified money managers, fighting to pay as little as possible in claims to protect their bottom line.

## 2.4 MANDATES

Figure 2. Insurance required by state<sup>9</sup>

While this is gaining much more prominence due to the Affordable Care Act (ACA), the march towards required insurance has been going on for some time. Car insurance has been mandated in some US states as far back as 1925<sup>10</sup>, some landlords require renter's insurance as part of lease agreements, and US employers are required to pay unemployment insurance and disability insurance<sup>11</sup>, although the latter varies by state. When mandates are coupled with the already profitable insurance business model, policyholders end up losing even larger percentages of their income with the insurance companies getting richer. An increase in policy count also highlights another problem: most insurance policies cover one liability which causes policyholders to require (and manage) multiple different policies and ensure these are in line with federal and state requirements.

<sup>9</sup> <http://rsiclub.tk/gezy/car-insurance-requirements-by-state-2170.php>

<sup>10</sup> [https://en.wikipedia.org/wiki/Vehicle\\_insurance\\_in\\_the\\_United\\_States](https://en.wikipedia.org/wiki/Vehicle_insurance_in_the_United_States)

<sup>11</sup> <https://www.sba.gov/managing-business/running-business/insurance/insurance-requirements-employers>

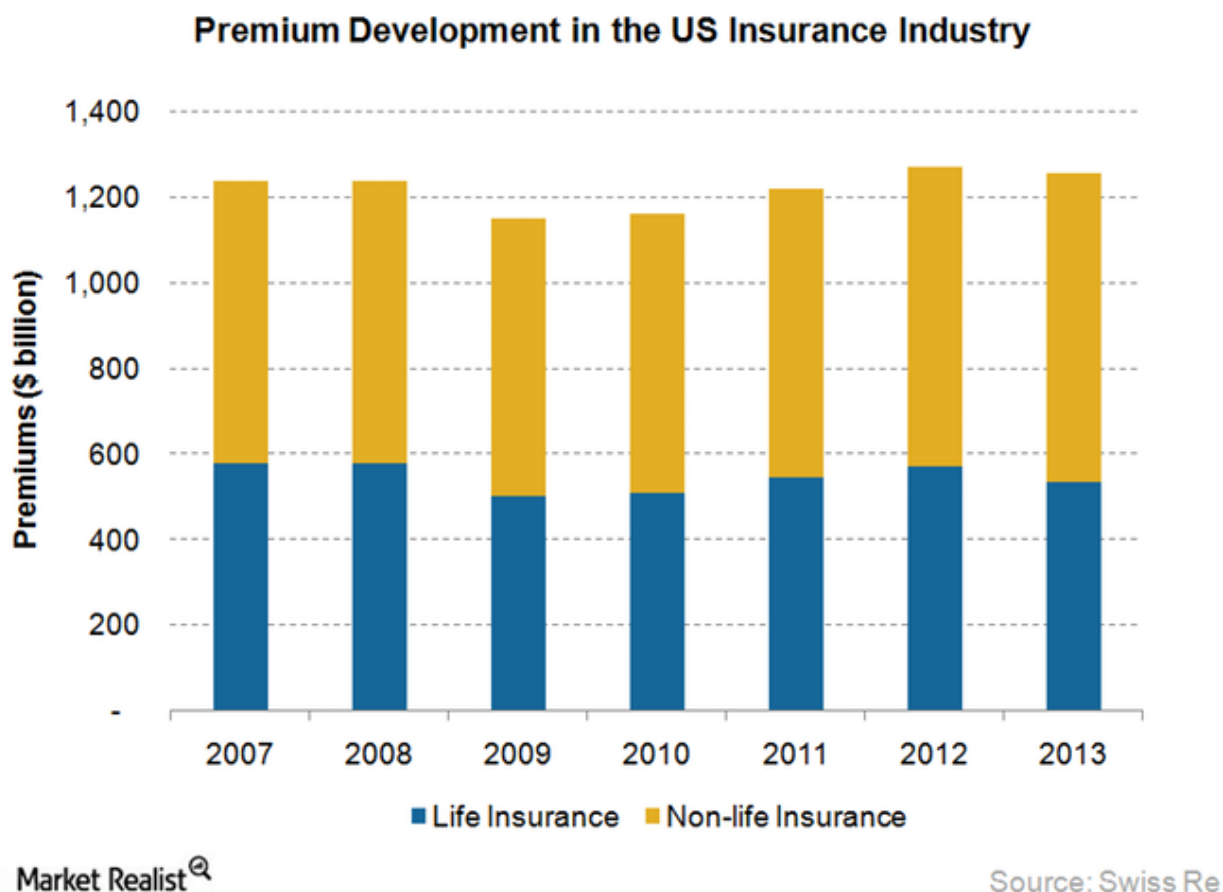


Figure 3. Insurance Premiums by year<sup>12</sup>

UMC will be a one-stop-shop for insurance. It will be sought to be accepted wherever and whenever insurance payouts are necessary, whether that be auto repair, house reconstruction, or medical bills.

## 2.5 DEDUCTIBLES

Most policies require holders to pay out of pocket while submitting a claim, before the insurer agrees to cover any of the damages. Many policyholders are unable to pay their deductible, either forcing people into a payment plan or avoiding making a claim due to cost. In 2014, 28% of insured Americans avoided some aspect of medical care due to cost<sup>13</sup>. There is typically a tradeoff between premium and deductible cost, but this is risky proposition for policy holders. Lower premiums mean higher deductibles, which makes it less likely you use your insurance. Higher premiums mean lower deductibles, but that falls into all the pitfalls mentioned in the section above. We believe deductibles,

<sup>12</sup> <http://marketrealist.com/2015/02/us-insurance-industry-largest-world/>

<sup>13</sup> [http://www.commonwealthfund.org/~media/files/publications/issue-brief/2015/jan/1800\\_collins\\_biennial\\_survey\\_brief.pdf](http://www.commonwealthfund.org/~media/files/publications/issue-brief/2015/jan/1800_collins_biennial_survey_brief.pdf)

co-pays and co-insurance are the first major area UMC can make an impact while a financial base is established.

## 3 UMC

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Initially, UMC will operate with coin holders acting as both policyholders and insurer, essentially combining the role of the traditional format. We have considered multiple models for the initial implementation. UMC will initially be used to pay a benefits package in case of life emergencies. We are seeking to disrupt the hidden finances of carrying an existing insurance policy.

### 3.1 OPTION 1 – ADDITIONAL TRANSACTION FEES

There will be two values stored with a coin: intrinsic and invested. The intrinsic value of the coin is self-explanatory: this is the value of UMC on open exchanges. The invested value is the portion of the investment pool which owning a token entitles the coin holder to in case of a claim. Initially, we propose the UMC network investing 0.25% of all traded funds into a fund of ETH. While there are fees to pay no matter the transaction on many blockchains, we aimed to leave ours low to encourage both buying and selling of UMC while still building future value for claim payouts.

Smart contracts will allow policies to be awarded and paid out on a peer-to-peer basis. Any float which is accrued from the investing of premiums would be paid out as rebates to all policy holders. Developers will not approve or deny insurance claims, nor will they be responsible for paying out insurance claims. The investment value of a coin is tied directly to that coin and cannot be manipulated. The investment value of a coin can be redeemed by a holder if and only if they submit a request via the UMC network and have it approved. Insurance claims will be submitted to the UMC network and withdrawn from the invested funds. If your claim cannot be paid by solely the invested funds in your holding, the remaining balance will be equally drawn from all coins in the pool. Policies and claims will be tied to a user's public key and any tokens they hold.

Ultimately, we decided this model was too complicated for our architecture. If tokens are traded on the open market, we do not want any extra value to be tied to the token. This would cause UMC to act more as a security and may cause stricter regulation of our platform. Additionally, we do not encourage people to use our platform in this model.

### 3.2 OPTION 2 – PAY UMC FOR BENEFITS

The much more likely approach for our initial release will follow a model like Augur.<sup>14</sup> A benefit package can be created by a user by spending UMC on our network. This value is added to our float and immediately invested. The cost of a policy will not be 1-1 with UMC spent as this would provide no benefit to the user. Upon initial release, we imagine an approach of buying a policy worth 5x the UMC spent and policyholders being able to redeem policies once every 180 days. For example, if you purchase 2 ETH worth of UMC during the crowd sale (more details about conversion below), then you would be able to buy benefits eligible for 10 ETH worth of valid payouts in the next 180 days. If you do not submit a valid claim in the next 180 days, the payout amount does not roll over. You are eligible to

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<sup>14</sup> <https://augur.net/>



cancel your benefit package at any time and withdraw your UMC, but you will do so at a 10% penalty to avoid fund depletion.

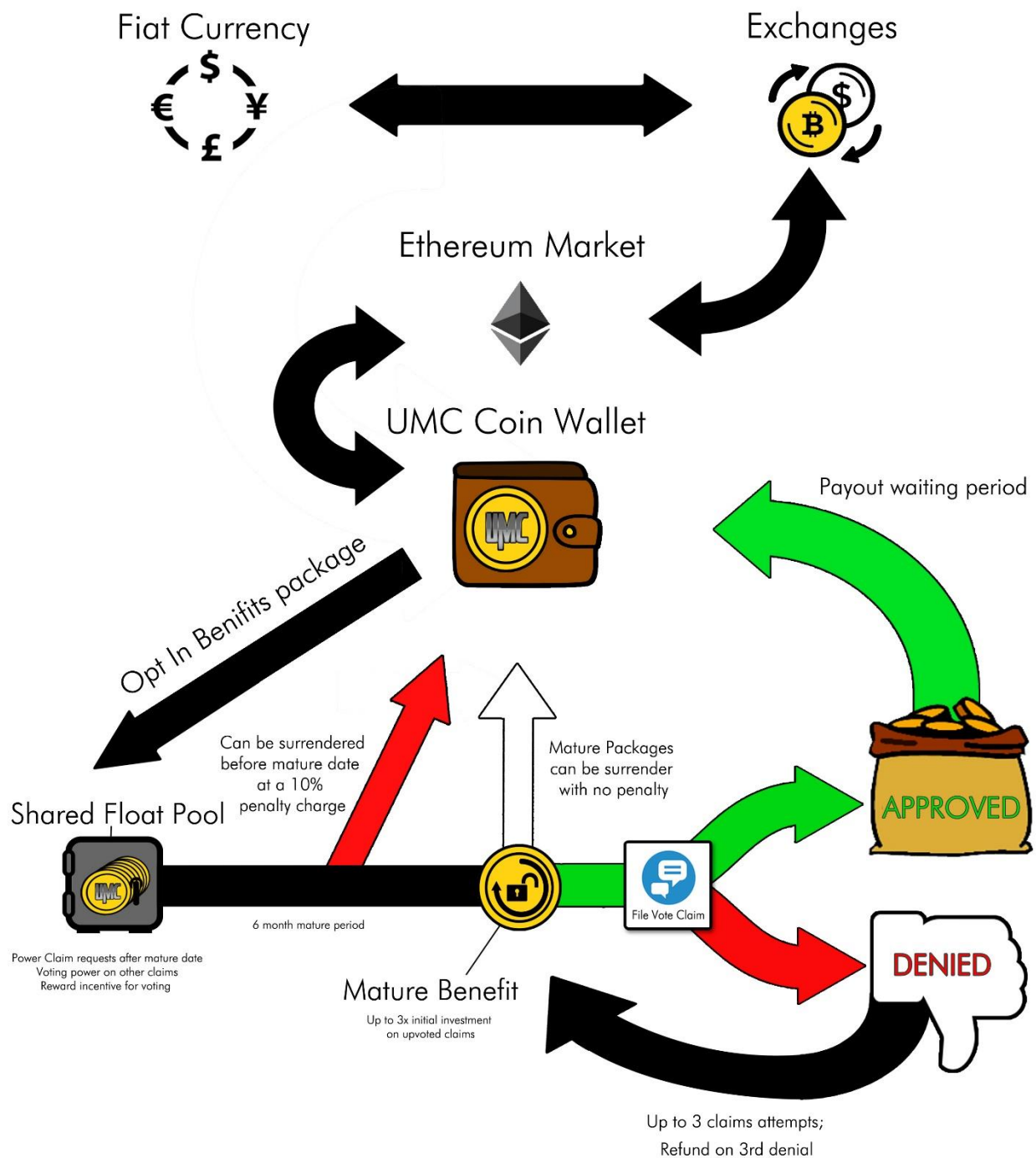


Figure 5. Basic UMC Ecosystem

### 3.2.1 Guarding against fund depletion

One concern that we share with traditional insurers is guarding against the funds being depleted. We will mitigate this via a few avenues.

#### **3.2.1.1 Early Withdrawal Fees**

If an address opens a benefits package, they are eligible to withdraw their UMC at any time. However, if they withdraw prior to 180 days of policy creation – they do so at a 10% UMC penalty. We may adjust the penalty in case the float is depleted too quickly.

#### **3.2.1.2 Fraud Votes**

If a community member is discovered to have submitted a fraudulent claim, we propose canceling their policy and keeping the funds in the float.

### **3.3 POLICY CREATION, CLAIMS, MATURE DATE, AND WAITING PERIOD**

A policy can be created by any coin holder. Their policy will be tied to their wallet address and a claim must be made against a certain policy. You cannot make a claim against a policy not associated with your address. UMC will pay out claims based on a schedule of benefits. The schedule includes auto, home, life, or health costs uncovered by traditional insurance policies.

Claims will initially need to be judged by the greater community to be approved or denied. If a claim is approved, the value of the coin holder's investment portion of their UMC will be credited first, followed by a payment from the greater UMC network drawing from other tokens. There will be a few safeguards to protect this from abuse:

#### **3.3.1 Waiting Period**

Each policy will have a waiting period – ensuring these policies cannot be created and redeemed immediately. When initially launching UMC, we propose a waiting period of 90 days.

#### **3.3.2 Maximum Payouts**

To avoid overdrawing or otherwise straining the finances of UMC, we will set a maximum payout for exchanges. We intend to only cover our schedule of benefits initially as they are financially less imposing and does not require the full adoption of UMC as a viable insurance alternative. To reiterate, UMC is not insurance – it is simply a wealth store to be paid out in case of life emergencies. We are limiting payouts to 12,000 UMC, meaning the maximum investment one can make is 4,000 UMC.

#### **3.3.3 Minimum Policies**

To prevent multi-wallet vote stacking, we propose creating a minimum policy amount to discourage users from opening multiple policies with the sole purpose of garnering votes.

### 3.3.4 Regulating Policies and Claims

We will attempt to have some automation in place to automatically reject claims, but the right to approve will be a 24-hour vote in the community. While we initially discussed stricter regulation on payouts, we ultimately decided to let the community decide payouts. We will hard cap the payout amount initially, as discussed above, to prevent any irregularities during the initial launch, but we will allow the community to decide the payout of a claim. This allows the community to set the guidelines for the market and account for things like inflation, severity of circumstance, and how comprehensive is the evidence submitted.

A community vote will take place for 24 hours, the choices will be:

- i. Yes – specify UMC amount
- ii. No
- iii. Need more evidence

We will not publish vote totals until the conclusion of the voting period to not sway votes. We will have a simple majority rules system initially. If the 'yes' votes win, the median price of the submitted payouts will be paid to the policyholder. Additionally, there will be added incentives to be on the "winning" side of a claim to encourage fair voting.

We live in an age where insurance currently may not cover various out of pocket expenses from your policy, or items you may need that are not covered by a policy (ex. assistive medical equipment, flat tires). While growing UMC, it is easier to first augment existing insurance than to completely replace it.

## 4 ROADMAP

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Our main product during the crowdfund is to create the infrastructure and client for exchanges, voting, penalties & fees, and claims. Afterwards we will explore marketing this to existing agencies accepting insurance claims directly, expanding policies into different areas, and general algorithmic reviews to ensure proper float throughput.

*June-July 2017* – Whitepaper written, website launched

*August-October 2017* – Client and smart contract development for benefits; float infrastructure implementation

*October 2017* – Client launched

*September-December 2017* – policy/claim creation; claim review from community

*November-December 2017* – start partnering with existing benefits companies to offer UMC through their network

*February 2018* – Client feature complete

*May 2018* – automatic claim review; coin holder policy improvements

*2018* – further partner expansion; algorithmic review

## 5 CROWDFUND

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**Crowdfund Start Date:** 20 August 2017 12:00 UTC

**Crowdfund End Date:** 20 September 2017 12:00 UTC

**Issuance of UMC Tokens:** 100 000 000 Tokens

**Exchange rate:** 600 UMC = 1 ETH.

**Minimum transaction amount:** 60 UMC (0.1 ETH)

**Maximum transaction amount:** 1 800 000 UMC (3 000 ETH)

**Bonuses:** in the first two days, the participants will get a 20% tokens bonus

**Bounty:** 1 200 000 Tokens (1.2% of issuance)

**Total Sale goal:** 100 000 ETH

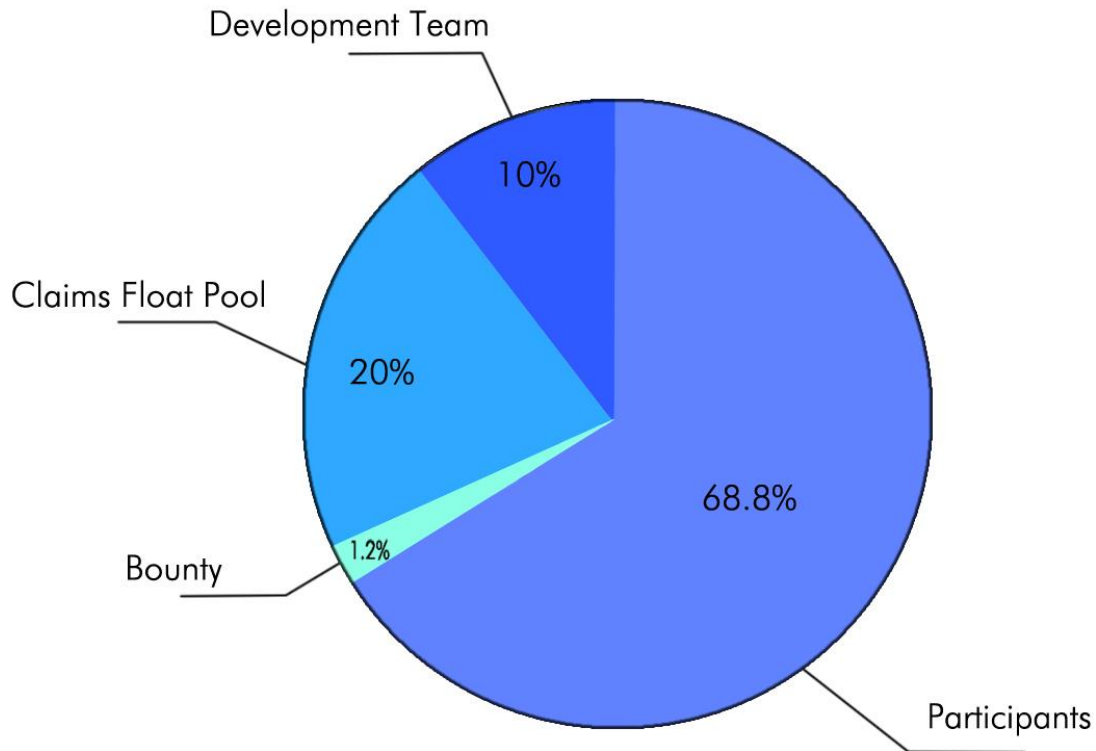
**Minimal Sale goal:** 5 000 ETH

Token distribution rules:

- 68.8% (68 million tokens) will be available to participants
- 20% (20 million tokens) will be allocated to the UMC trust and will be used to build a preliminary float pool.
- 10% (10 million tokens) will be distributed among team members
- All collected funds shall be received and stored on wallets with multi-signatures.

## Token Distribution

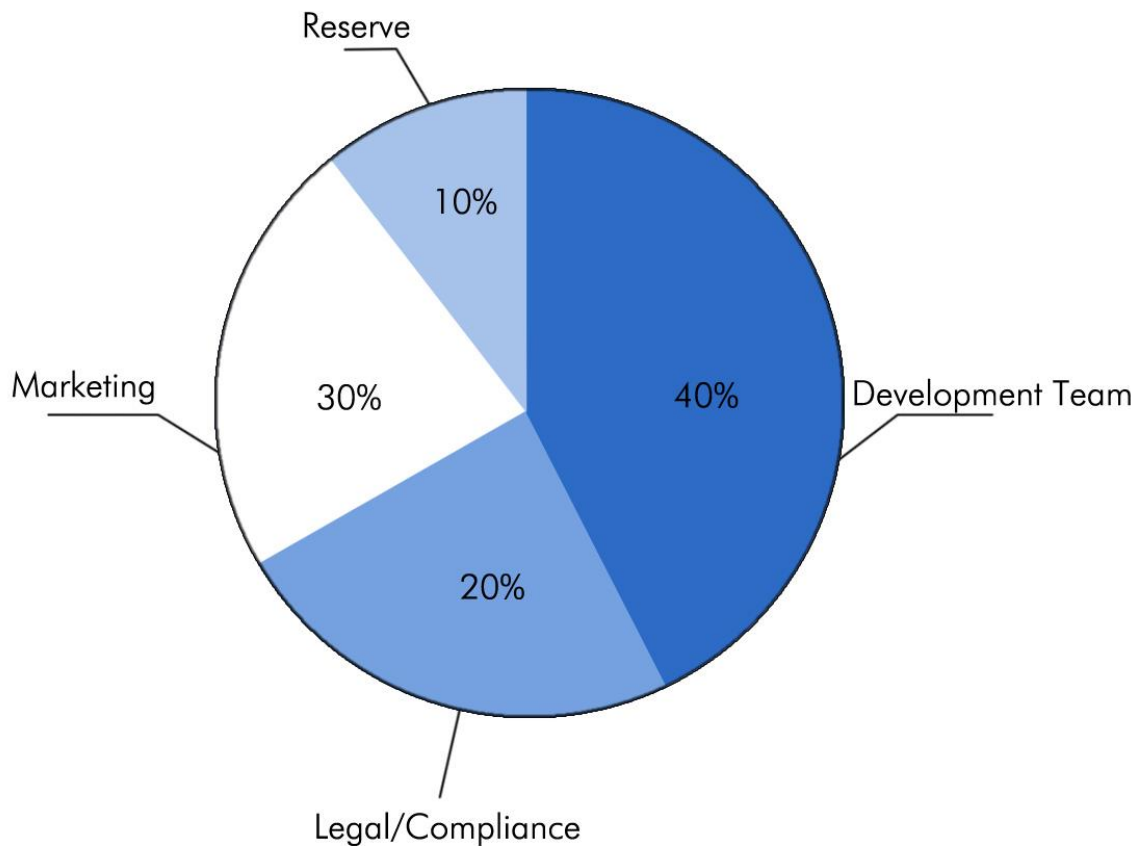
(100,000,000 circulating supply)



### 5.1 CROWDSALE DISTRIBUTION

The crowdsale funds will go towards funding future development of the UMC platform and helping us meet our roadmap goals. We are currently a distributed team and plan to maintain this arrangement to keep costs low. Depending on the success of the crowdfund, we see our funding able to sustain the development team for 3-4 years.

## Crowdsale Distribution



## 6 CONCLUSION

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UMC is being developed to decentralize benefit payouts and put power into the hands of policyholders. We are targeting an aggressive development and launch date for our tokens and client allowing coin holders to submit and make claims. Initially we will target paying limited amount benefit payouts with very strict and very low payouts to ensure solvency. You can learn more about the team and keep up with our progress at:

<https://www.umbrellacoin.org>

<https://bitcointalk.org/index.php?topic=2025943.msg20180128>

<https://www.reddit.com/r/UmbrellaCoin/>

<https://twitter.com/umbrellacoin>

<https://www.facebook.com/umbrellacoin/>

<https://github.com/umbrellacoin>

<https://discord.gg/85D6jNr>