currency

ARM: AUTOMATIC RESERVE MANAGEMENT AI

THE TECHNOLOGY BEHIND X8 CURRENCY

Powered by

ioNectar

Change The Trading Future

Archived copy · cryp2nova.com

CONTENT

1. **Introduction** 3
2. **ioNectar risk management platform** 3
2.1. FIX Protocol 3
2.2. Automatic multi-bank & multi-broker technology 3
2.3. ioNectar – Professional Portfolio Risk Management platform 3
2.4. Currency Market Space 4
3. **Automatic reserve management – ARM** 5
3.1. ARM STP (Straight Through Processing) 6
3.2. ARM Market Spread Evaluation 6
3.3. ARM Risk Framework 7
3.4. Individual worst case & individual risk free rate 7
3.5. Composite worst case & composite risk free rate 8
3.6. Relative time and final allocation 9
3.7. Cheap vs. Expensive 10
4. **Summary** 10

ABSTRACT

Automatic reserve management is an AI technology, which applies portfolio risk management on X8 currency for real-time investment operations. ARM enables the creation of a proven, safe, liquid and secure currency, which automatically optimizes own reserves to fight inflation.

CRYP2NOVA

Archived copy · cryp2nova.com

1. INTRODUCTION

The following document describes the system of Automatic Reserve Management ("ARM") – a balancing of assets between fiat currencies, cryptocurrencies and gold coins through an examination of protocols, mathematical context of portfolio risk management and financial principles.

ARM is applied on X8 currency and was developed by ioNectar. ARM AI technology is a "black-box" operating since 2014. Overall, ARM is a product of 10 years of our work. It has been proven in real financial environment and produces great results. X8 currency holds the exclusive license to operate ioNectar's automatic reserve portfolio management technology in crypto business.

2. ioNectar RISK MANAGEMENT PLATFORM

2.1. FIX Protocol

FIX Protocol stands for Financial Information eXchange protocol. It was jointly created by the established largest financial names in an organized approach to cover the field of fast and reliable exchange of financial information on the internet and between financial parties like banks, brokers, exchanges and other financial institutions.

The ability of FIX protocol engagement enables multi-bank and multi-broker setups in a Straight Through Processing (STP) manner. In reality, there are pings and operating latency on levels of milliseconds, however among the technologies this protocol carries the least practical latency and is very stable. The effect is that it works pretty much like real-time architecture. The protocol has been around for years. It is broadly adopted and has been tested in the most demanding production environments in the world. FIX Protocol remains the pillar of financial information flow and will keep this role for at least the foreseeable future and is a key component of ARM.

2.2. Automatic multi-bank & multi-broker technology

When different brokers and banks are connected to an STP FIX Protocol, accumulated and integrated into one operating interface, the functionality available on the lines is therefore available as a whole on command. Automatism therefore makes a lot of sense on further levels of business. ioNectar has established FIX Protocol connections to several different brokers and banks and leverages this architecture further in cryptocurrency business.

Together with FIX Protocol the ARM AI technology enables multi-broker aggregation and real-time across the board automatic portfolio risk management functionality.

ioNectar uses diversified broker structure and connects up to 8 prime of prime brokers or banks and diversifies holdings on accounts in different currencies with each different provider to minimize risk of broker failure. It also additionally broadens the price risk diversification, although the system is not configured for arbitrage between brokers. We feel other businesses should ideally cover inter-broker arbitrage. Our main interest is to diversify broker or bank default risk systematically and to the highest possible degree.

2.3. ioNectar – Professional Portfolio Risk Management platform

ioNectar is the owner of ARM AI and is also the name of our professional portfolio risk management platform that offers financial risk management at a scientific level of precision. It uses an automatic system to essentially perform one task - automatic allocation of capital to maintain the best marginal ratio between risk and reward. The amount of capital allocated is in direct relationship to how competitive an opportunity is at each available currency market price measured by factors generally described in this document.

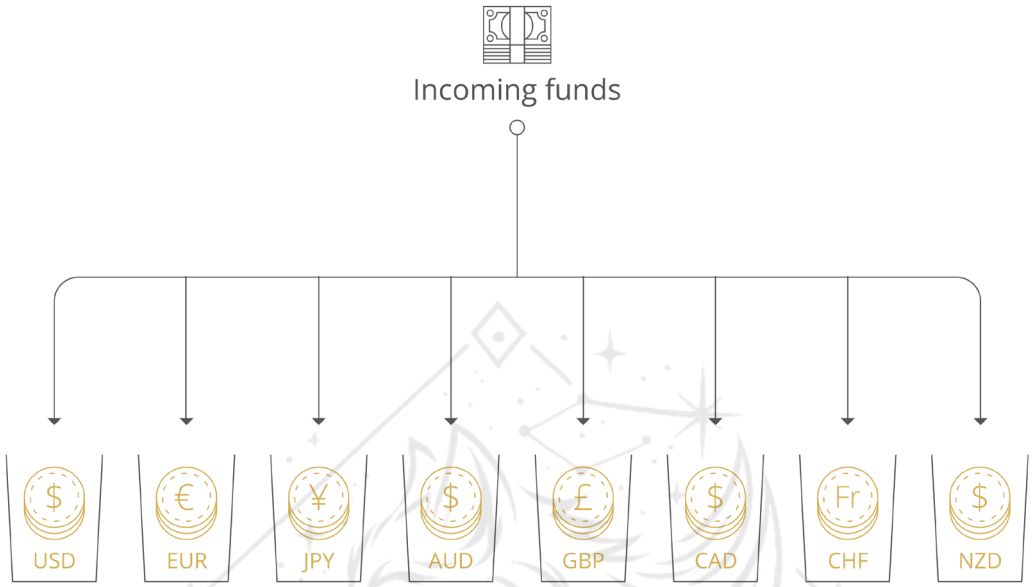
As a result, each currency receives a specific delegated amount in the total basket according to relative competitiveness it shows at a given real-time price, while the system monitors the overall field of opportunity across all currencies and

Archived copy · cryp2nova.com

adjusts diversification between currencies respectively.

2.4. Currency Market Space

X8 currency reserve assets, which back the X8 currency, are diversified using ioNectar technology across the field of major fiat currencies. These are USD, EUR, JPY, AUD, GBP, CAD, CHF, NZD, which are fully electronically liquid. Capital can be transacted freely within milliseconds globally between these currencies.



Membership in the basket is available for currencies that fulfil the criteria of 100% convertibility: a high transaction rate, consistent electronic liquidity and simple convertibility of meaningful sizes to all other members of the currency basket.

For now, ioNectar supports the 8 strongest currencies. If and when new 100% convertible currencies become available, they will be added to the basket. The Chinese currency is a strong candidate – however the implementation of e-liquidity across the broader foreign exchange space of all 100% convertible members is not fully implemented on the global market for the Chinese currency yet. We are monitoring developments and we encourage the free capital market to develop further and to become richer.

In addition to fiat currencies, the basket also holds gold which is valued against the basket as well. Just like all the individual fiat currencies in our system, gold receives delegated amounts of capital according to relative real-time competitiveness. X8 currency holds gold in physical reserves in the format of gold coins. Nevertheless, it manages marginal fluctuation of the reserve through eGold ARM. eGold ARM uses XAU/USD, XAU/EUR and other XAU prices in the electronic market to follow the market in an STP manner in order to save conversion costs of small incremental physical reserve. That is when physical gold would be transacted between gold and cash currency. Daily real-time gold price fluctuation is therefore handled through eGold trading. eGold ARM earns an income in the market as it balances the relative size of gold in the total reserve according to actual real-time prices of the total basket space. In the X8 currency system physical gold acts as the ninth currency.

In recent years, blockchain products have been taking advantage of the currency market's demand for a wider variety of store of value options. Blockchain currencies are becoming de-facto currencies regardless of whether they perform like ones in the broader sense. They are becoming legal tender, although no currency is the same. What is true is that blockchain products do have potential and, despite early low levels, the exchange is picking up and trends indicate that this will continue at an accelerated pace. X8 currency acknowledges that and is preparing the foundation for blockchain currency products to start competing with other power blocks and vice versa. X8 currency will incorporate open competition between FIAT, GOLD and BLOCKCHAIN and will delegate capital allocations within this space with the primary objective of safety and stability through systematic diversification. Blockchain members will be accepted into the basket, which will have sufficiently competitive characteristics of money that will be able to complement the

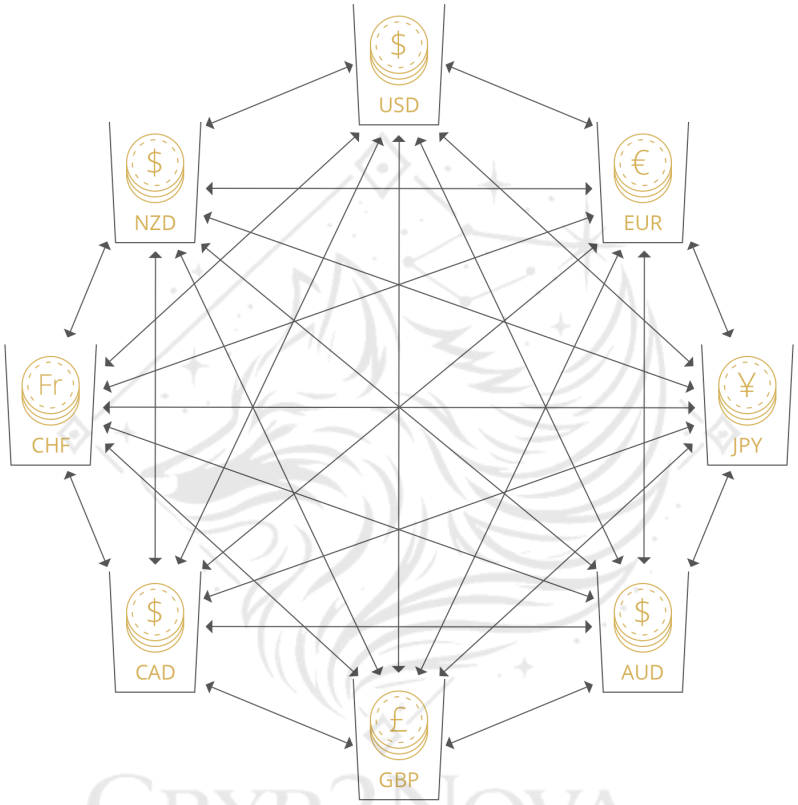
Archived copy · cryp2nova.com

FIAT + GOLD ARM. All blocks will be beneficiaries of this activity, however, through the introduction of the X8 currency blockchain, which will be able to position itself as the delegator, will be able to generate earnings on the basis of the service it will provide to fiat and gold space through cryptoactivity.

3. AUTOMATIC RESERVE MANAGEMENT – ARM

Key components of an advanced automatic reserve management system are quick reaction speed, market spread evaluation, and risk evaluation and are evaluated in more detail in the following sections.

X8 currency uses automatic reserve management (ARM) to allocate capital across different currencies.



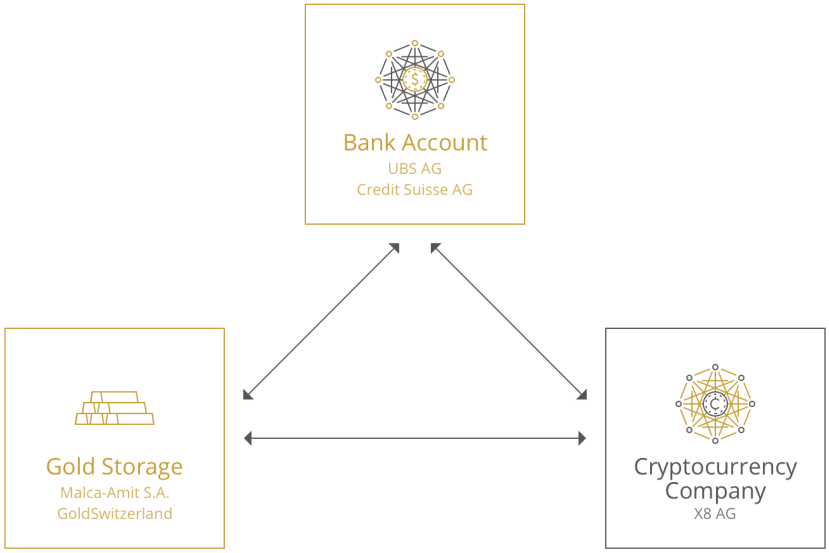
CRYP2NOVA

ARM includes cash currencies, gold and blockchain currencies and allocates capital proportionally to the competitiveness and the individual and the aggregate volatility of each part. The combination of a three-fold structure of storing assets in a CASH + GOLD + BLOCKCHAIN system is that one side will always win.

However, we cannot know which side will be winning in which period or in the long run. That is why it is important to be present in all three fields and secure a winner regardless of how history will unfold in the currency space. This is another competitive advantage of X8 currency. It does not rely on a particular scenario. It remains an unbiased system and it executes all operations fully automatically. If all cash currencies will collapse, then gold will multiply in value. If traditional cash and gold will decline because they become out of date, cryptocurrencies should be the money of the new era. An automatic reserves management between the three CASH + GOLD + BLOCKCHAIN pillars delivers an additional level of market outcome independence – key for a stable modern currency. We believe these views will only strengthen once the blockchain world introduces more of the valuable currency products.

In addition to allocating capital between any of the cash currencies, gold and blockchain currencies, 3-ARM is also capable of X8 currency liquidity provisioning on the blockchain market.

Archived copy · cryp2nova.com



3-ARM will automatically maintain aligned pricings across different blockchain products and will establish cryptospace convertibility as a natural consequence. This will be a unique trait of our cryptocurrency. The convertibility will be backed by FIAT and GOLD reserves value combined. A free blockchain market is welcomed; however, we will also be an active participant in it, promoting stability. The market will still be free, plus more efficient and competitive as well.

3.1. ARM STP (Straight Through Processing)

An automatic reserve management system receives real-time information about all prices of a broad set of currencies from an array of banks and brokers to which it is connected. Every new price in any of the currencies in the market triggers recalculation of the total combined value of assets so that at all times the total structure of all the accounts with different banks and brokers is up to date in a cumulative manner.

As this input flows into the ARM system and generates account valuations in an STP fashion, ARM has around 25ms to 50ms to react to each new price in the market and to adjust ratios between members of the basket or else probability of rejected orders increases. Banks and brokers can do this even if the price is still prevalent in the system, but is getting “too old” and therefore they perceive the execution of an order on the price more risky. Fast reaction time is crucial in order to keep reserves up to date.

3.2. ARM Market Spread Evaluation

The ARM system keeps track of differentials in relative volatilities of all spreads in all currencies. Once it processes this information, it creates its own basis for further calculation of relative proportions between the currencies held in the reserves. Because it calculates volatility and relative value of the volatility of the spread, it not only sees which price of which currency is lower, but also receives the information about which currency is the most competitively priced from the perspective of price/earnings factor combination.

This link can be made because in the X8 currency system volatility is directly equaled to volume vector. If volatility increases, volume vector increases, hence the earnings potency increases as well (Earnings = volume * average trade profit). Nevertheless, earnings have more meaning when perceived through price or the amount of capital by which earnings are generated.

The relative volume vector delegated to a particular currency by the ARM depends upon the relative volatility of each currency. Relative currency volatility acts as an input for the calculation of relative differential of the relative volatility of the spread between all currencies. ioNectar technology achieves this by measuring price and earnings values through a flexible yardstick, which is the prevalent spot market bid/ask spread. Generally speaking, this means that there are 3 factors which influence the delegated ratios between currencies: price, volatility, and spread, where price represents the capital handle, volatility represents the multi-dimensional velocity of the market and spread represents relative decision costs, which are the perceived value interface from the investors’ viewpoint. The result is a multipolar

Archived copy · cryp2nova.com

opportunistic landscape of the market and the costs to tap particular coordinates of the opportunity space.

The principle of ARM acknowledges that general market price space is uncertain and fundamentally unpredictable. Despite this, advanced portfolio risk management ARM can benefit from managing uncertainty systematically.

3.3. ARM Risk Framework

Managed uncertainty is a universal term. It begins with an assumption that everything can become nullified and nothing can be predicted. We can analyse market prices using physical methods. This means that exchanges are the greatest technological particle accelerators that humanity has created. These particle accelerators are connected to the way our society interconnects, lives and develops. Each market price can become nullified and is subject to the laws of physics. In quantum terms each market price actually is becoming nullified.

In real life, this happens constantly. Prices can and do fall to zero and currencies become extinct. If we extrapolate from this, we can calculate how much of a non-zero tendency there is in the unified information field. ioNectar's ARM AI technology was developed as a "blue sky" project based on 10 years of developing insights into scales structure of market prices and their effects.

Non-zero tendency can be understood by recognizing the persistency, durability, evolution or longevity and natural growth of an investigated subject.

Uncertainty in the markets is already managed by the rule structures implemented by the global system itself. In true respect, there is a marginal threshold where the rulebook structure and scope of the rulebook can increase uncertainty. That is when the structure does not match the intent of the rulebook. No system is perfect and sometimes systems overdo corrective action. This can happen when market price structure is challenged with many consecutive limit down market openings for example. Exchanges and electronic financial networks have learned to address these challenges using a multi-layered system of safeties and fall-backs to ensure the system's resilience against various shocks. All in all, it is very uncommon for the market value to drop to 0 in a second even if there was an unimaginable glut of sell orders somehow put into the global system.

We, as investors and observers, can see the market inertia of tendency toward the nullified state, but not the state itself. This fact is the result of actual expectations that markets can tank to 0. So there is a buffer between the state and the tendency. Because expectancy of collapse toward 0 exists and because certain groups are prepared for it, straight line collapse toward zero cannot manifest. This principle starts providing support for non-zero tendency.

3.4. Individual worst case & individual risk free rate

How much value there is in the non-zero tendency is explained as the basis for the free market risk-free rate in ioNectar technology. This is how much one can earn from negotiating in the market with this principle. We do expect the market landscape to remain in continuous change mode and we do expect at any moment prices of any currency to gravitate toward 0 on an immediate spot basis. At any point in time a scenario exists in which a market price could exist in nearing actual 0, which is in the range of negative -99,999% spot volatility.

Fall of a currency from its starting price to -99,999% in a straight line and direct way without any intermediate corrections in price represents the worst expected case our system uses to perform further calculations for capital allocations between different individual currencies. This worst case scenario however practically does not manifest itself in the real environment. Currencies are much bigger and broader instruments and they tend to fluctuate less than stocks. They are protected by monetary authorities to be more stable than other asset classes as well. It is especially unlikely for this scenario to happen to the major currencies chosen for the basket.

This fact is the basis for two observations. First, from a quantum perspective, if the differential between the actual present time and future expectation forecast date for nullification of an instrument is shortened, and especially if it is being reduced on an accelerated but stable plain, then the expectancy for -99,999% spot volatility of an instrument or a currency becomes increasingly certain. Actually, mathematics predicts and shows that it becomes so quickly 100% certain for the price to become nullified, that mostly even when this does become 100% certain to become realization,

Archived copy · cryp2nova.com

it does not become realized and nullification does not happen. Instead, it has a continuous tendency toward zero, but never actually to a zero state.

But why? Markets term this phenomenon fear. People and investors see the market already dead in their minds when they have a chance to observe flash crashes in real-time for example, which can shave 10% off in a matter of seconds. But if the market does not hit 0 within an hour after such a crash, then clearer heads prevail over irrational fear. There is no other way. Spot time is very precise. If inertia toward the nullified state falls from the accelerated stable plain, the market will naturally feel more assured despite the dent and that is why confidence returns.

Of course, this could not be true if such a state could not or would not be anticipated. That is why the second observation is that if -99,999% spot volatility is anticipated, the gravitational polarity does not change at -100% spot volatility. Therefore, basket momentum on a macro level has a traditional non-quantum vector, which means that a single currency collapse cannot take the whole multicurrency system down. The combined state will keep the direction of its persistency or inertia vector even if the individual elemental vector of the overall state becomes nullified. However, this is not entirely true when the anticipated volatility is much lower – for example, as is sometimes used in a speculative environment.

This theory can only be verified on the most liquid financial markets in the world. The ioNectar team did just that and has a proven track record. This means that X8 currency can introduce a very exclusive novelty in the market and make it available as a product for cryptocurrency investors world-wide.

3.5. Composite worst case & composite risk free rate

While the individual worst case scenario is that a single currency in the basket of FIAT ARM would fall in a straight line to 0, the composite worst case scenario for FIAT ARM is different. It requires all currencies in the basket to collapse to 0 and they must do so simultaneously.

This scenario is a much more advanced worst risk case scenario. That is because if not all of the currencies in the basket fall to 0 at the very same time all at once with the very same pace, the relative ratios between currencies in the foreign exchange market will show some of the ratios to appreciate regardless of all of the currencies experiencing a fall.

This is what diversifies the price risk in individual currencies and forms the basis for risk adjustment within FIAT ARM. In practice this means that the basket of 8 major currencies can be wiped out only in a case where the market shows 100% spreads on all of the currencies simultaneously. In such a scenario FIAT ARM would lose all of its purchasing power. However, since X8 currency works by virtue of 3-way automatic reserve management, which includes physical gold, gold provides protection against fiat currencies' purchasing power loss.

The probability of all of the 8 major currencies to fall to 0 in a straight linear fashion is extremely low. It could become a reality in a major and complete fiat system collapse. The gold price could rise by 10 fold or more than that, should such a catastrophic fiat scenario unfold. For this reason, it is important that X8 currency holds physical gold in reserves. Furthermore, gold held in the reserves will not be held as gold bars, but as gold coins only. The reason for this is that gold bars are not categorized as money. Gold bars are treated as an asset. Since our intent is to make X8 currency fully convertible, X8 currency must hold reserves in gold cash – and that means gold coins. Since gold coins are the only gold asset denominated in guaranteed value of each individual fiat currency, backing of a currency by gold coins provides an additional hard wired link to actual cryptocurrency convertibility against the major fiat currencies. It also means that we do not require arbitrary acknowledgment by monetary blocks to accept X8 currency as convertible – it is already convertible into gold fiat by the virtue of cash gold reserves it holds.

It seems that it is impossible for the fiat block to lose all of its purchasing power without gold rising against fiat currencies at the same time. However, we cannot be 100% completely sure that gold would actually be the beneficiary of purchasing power reallocation in such a scenario. We believe the next best candidate is blockchain products because blockchain assets operate outside of the traditional monetary system and because they are not centrally controlled by any monetary authority. This is unlike any other liquid and exchangeable asset that could otherwise protect from fiat purchasing power loss. Blockchain ARM therefore plays a role of not only a booster of earnings but the ultimate systemic risk diversification in the 3-ARM system. If the traditional monetary system would run into big systemic problems, the best opportunity for the overall global economy to sustain itself in the new era will be through blockchain assets.

Archived copy · cryp2nova.com

As the 3-ARM system measures relative volatilities between all 3 asset classes it is able to allocate capital in real-time across all of these classes. The 3-ARM system is therefore capable of generating a yield independent of any individual currency. If at least some of the currencies in the total basket show real 2-way market flow, 3-ARM will earn income and make capital gains in those currencies and protect assets in reserves from depreciating significantly even in highly adverse market conditions. Total assets through this approach are also guaranteed not to lose their entire value under any circumstance.

3.6. Relative time and final allocation

Market time is quite flexible. Scenarios can unfold in so many ways. There are infinite shades of grey in how market price action can develop. The market has shown so many times that, in material terms, more nominal change can occur in one day during a certain period than in over one year during another period. That in itself does not make time relative though.

The point is that time expands and contracts from different vantage points of observation and that is what changes relative perspective from period to period. For example, the price of a currency drops by 30% very directly. After the sharp initial drop the price oscillation intensifies so that the price starts to move up and down by 1%. Such price band of the price is narrow and does not make up for the 30% loss. From the perspective of the long term buyer, who bought the currency before the 30% drop, the market seems unsolvable. Yet the amount of fluctuation in a price band after the drop is very meaningful when the frequency of the fluctuation in the price band is very high. In such case, the range can have a large earnings potential, despite the small 1% price travel, because the price quickly and frequently moves by 1% up and down. This earning potential can be higher than losses incurred immediately after the 30% price drop if the frequency of the oscillation is high enough. It depends on the starting perspective. In simple terms, more time has passed after the drop in such case even if on charts the 30% appears more prominent. In decision-making this is important.

What's more, the price band in similar real market cases would not even stay at 1%. It would contract further and the frequency of the price would decline at the same time, making the perspective of the long term buyer even more unsolvable. That is because relatively more time has passed after the initial price drop than has been perceived by market participants who entered the market before the drop. Because more time has passed than linearly observed, new incoming market participants have more power over the spot market outcome than that of old participants. If new participants were buying because the currency was inexpensive after a 30% drop, it seems to them the price is very generous at this high frequency and as investors they would accept even further price drops at that frequency or they would accept a decline in the frequency at the same price. This happens constantly in real market environment. This is a major challenge for market prediction. Because of this effect markets are unpredictable and because time changes they are not even predictably unpredictable.

We incorporated these principles into ARM so that ARM applied on X8 currency so that it takes advantages of all the elements and even how the market develops in this respect. Each element by itself adds incrementally to the effectiveness and value added of ARM. However, when all compounded into one solution, ARM works like an effective package.

ARM acknowledges relative time and calculates all the input of relative volatilities and price accelerations through the perspective of relative time, delegating allocated capital and ratios for its basket of currency adjusted for this factor. It means that it will not necessarily want to buy more of a currency which dropped more. Instead, it will want to buy most of the currency whose earnings are least expensive and the currency which, at the same time, is the preferred instrument from a perspective of age of earnings. High earnings and high relative earnings are interesting, but what if all currencies have high earnings and relative earnings at one point and they are similarly priced? Which currency would be more competitive in such case? ARM answers that the currency which reached higher relative earnings maturity, has a marginally higher chance of disproportionate price fluctuation and hence shows an increasing risk rate against earnings it offers.

In simple terms, when profits have already been made it is not so important if the price is still low. Other prices, which are low, could provide a better new opportunity and relatively more new time and new earnings will be available in newer places, while the old place will become relatively more unpredictable than newer places.

Archived copy · cryp2nova.com

3.7. Cheap vs. Expensive

Because of the combination of volatility measurements, capital values, decision costs in terms of market spreads and relative time scale 3-ARM combines all the aspects when producing trade action. This happens on a tick-by-tick basis for each price of each currency. For every new price of an individual currency ARM system calculates values against worst case scenario for that currency and for the basket aggregate. If the tendency towards worst case has realized and decision costs remain low, the system will deploy more capital. When the tendency towards worst case dissipates, the system will decrease the size of allocations. On the currency where profits have been made at the beginning of the observational period, the system decreases allocations most. Consequently, the ioNectar system always buys low and always sells high in real terms. This means in terms which are actually relevant from the investors' point of view. This input is used by ioNectar to move capital among currencies in the basket always from most expensive currencies toward least expensive currencies incrementally in a straight through processing manner across all diagonal connections between all the markets. It executes this approach rapidly and for all currencies simultaneously.

4. SUMMARY

X8 currency is an application of ioNectar ARM, the best market negotiating system available anywhere in the field of cryptocurrency. **It is able to allocate capital globally in real-time based on actual at the moment competitiveness of all currencies** when perceived through the lenses of price, volatility, decision-making costs and relative time. These factors are all hard measures.

It provides a guarantee that our ARM system will always buy low in real terms and always sell high in real terms. It adjusts ratios between currencies incrementally all the time to reflect the overall market picture systematically. We believe this to be the most efficient and precise way for worldwide real-time capital allocations and hence it provides the highest quality of earnings at the highest possible safety standard.

Stability is X8 currency's paramount mandate. It holds all the currencies in the portfolio at all times while it delegates relative ratios between them. Because it always has all the currencies in the portfolio it provides stability.

Regardless of the focus on stability, there will always be a yield. ARM generates risk-free rate yield through its principles and mechanisms. The reserves that it holds in all of the currencies can reach near light speed in our system. Therefore, X8 currency ARM is able to earn an additional very safe yield to help neutralize inflation naturally.

ARM works for the investor and his or her time. It provides a 100% asset backed foundation yet one which is highly active and takes conservative grade investment opportunities in the market all the time where rewards more than justify necessary costs and risks.

It works automatically, continuously, 24/7. This together makes the best combination between ultimate safety and sophisticated active investing.

Investors can now, for the first time ever, access this functionality in an open package through X8 currency.

Archived copy · cryp2nova.com

VISIT US

www.x8currency.com

Archived copy · cryp2nova.com