

Limited Edition Digital Books and Exchange Traded Funds: semi fungible tokens and the ERC-1155 token standard

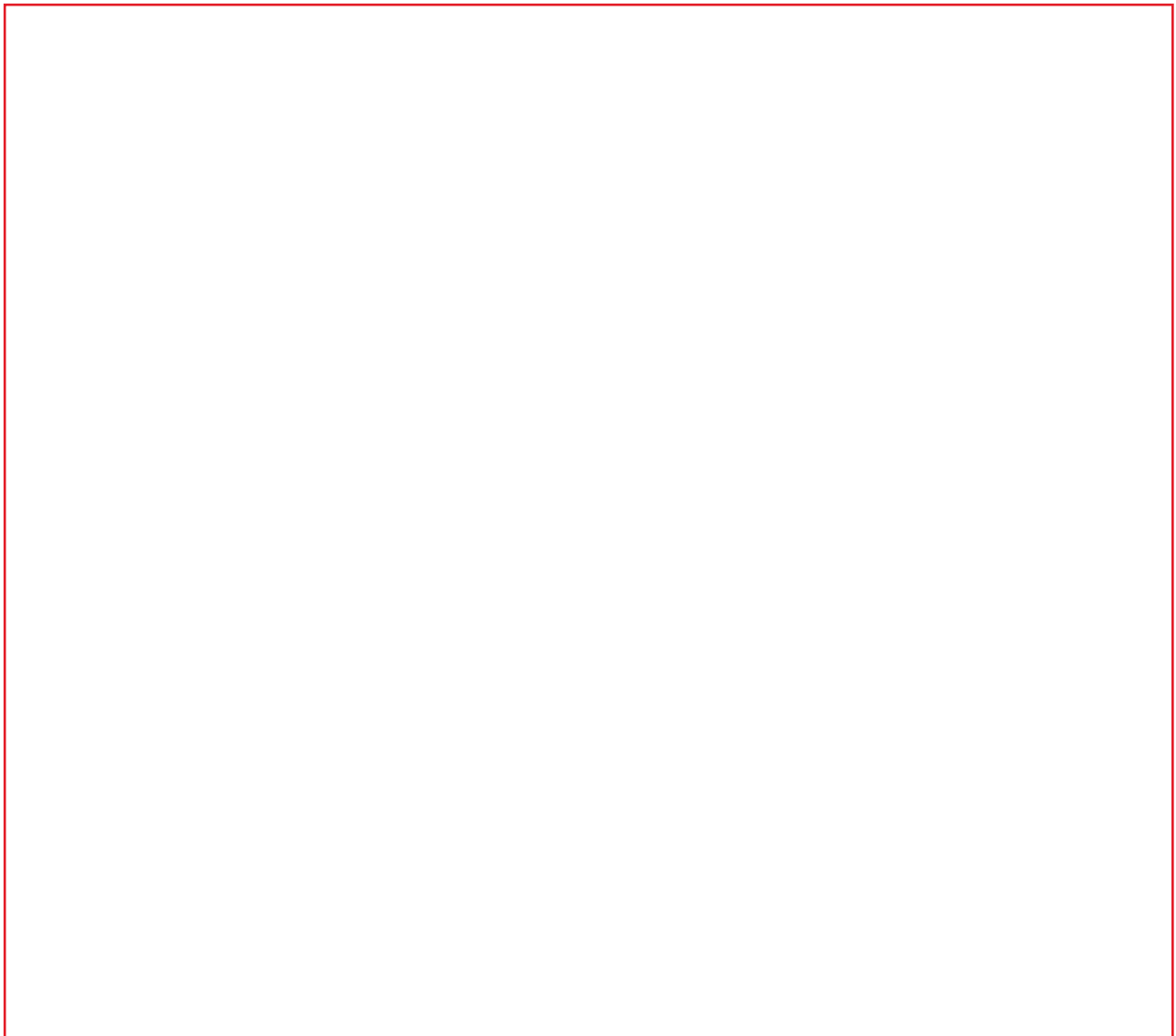
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Abstract

Limited edition digital books would be good investments for both exchange traded funds and individual investors. Limited edition digital books are a new means of publishing done by creating semi fungible tokens on the blockchain. The tokens consist of both an image and text and when the text is read in order, it tells a story like any other book. The book, being in a limited edition, enables the purchaser to not only obtain a book but also to obtain an asset which may increase in value. This is particularly because the book, being in digital form, can be copied and pasted to purchaser's social media which will act as advertisements for the book, increasing its value for all owners of the digital books.

A new use of the blockchain is the creation of limited edition digital books which can be created by producing semi fungible tokens using the ERC-1155 token standard. The ERC-1155 standard uses a single smart contract to produce many identical tokens, for example 10,000, and each identical token can be sold separately to 10,000 owners. Existing tokens are usually used for purposes such as limited edition artwork, in-game gaming purchases and sports memorabilia and can be created using picture, music and video files. It is however possible to create limited edition digital books using the ERC-1155 token standard.

Limited edition digital books can be created by minting tokens on websites like Opensea, Rarible, Super Rare and other websites. Tokens can be created on these sites and exhibited in particular collections and if the owner wishes to put the items up for sale, they can be listed for sale at either a fixed price or in an auction.

Limited edition digital books can be made up of a number of semi fungible tokens, each containing an image, possibly of a well known, out of copyright artwork, and text. The text will explain the art work but can do more than that. It can tell a story, either fiction or nonfiction, when the text in the tokens is read in the right order, which is simply a matter of having the tokens numbered consecutively. This of course would just amount to a normal picture book with numbered pages or an ebook. However, the block chain, with the ERC-1155 token standard, allows such a book to be created in a limited edition with the purchasers of the limited edition book being able to verify their ownership by showing the transactions on the blockchain using etherscan or another appropriate block explorer and analytics platform.

Limited edition digital books come in two types. The two types are those that tell a story when the text in the tokens is read in order and those where the text only relates to the image in that particular token. The benefit of this is that purchasers have a choice between buying a number of tokens that tell a story or single tokens that stand alone which typically will be art tokens. It is also possible to create supplementary or associated tokens to the story tokens which add detail to the story told by the initial story tokens. Examples of story tokens as at October 2024, on the Opensea website, are the [Battle of Waterloo](#), the [History of Printing](#), the [History of Electricity](#), the [History of Photography](#) and the [French Revolution 1789](#). It seems to be impossible to get the story tokens in the correct order on Opensea, but clear numbering of the tokens shows the order in which they should be read. Examples of standalone tokens as at

October 2024 are [Greatest Art of all Time](#), the [Art of JMW Turner](#), [Greatest Canadian Art](#) and [Battles of American Civil War](#) on Rarible.

The text in limited edition digital books is crucial, as it is the text which is unique to the semi fungible token, and is what gives the tokens copyright protection. It also allows the tokens to tell a story. The image in the tokens is also crucial as it tells the story in a different manner, it adds color to the story and status and prestige to the tokens when renown works of art are used in the tokens.

Images of art works on the internet do not normally have copyright protection if the original artwork is in the public domain. The [Bridgeman Art Library v Corel Corp](#) case held:

“Photographic reproductions of visual works in the public domain were not copyrightable because the reproductions involved no originality”.

Subsequent jurisprudence has agreed with the Bridgeman case. The Bridgeman case allows the use of any image on the internet, so long as the contents of the image have no copyright protection. This will mean there are many images of works of art available for use in limited edition digital books. This brings us back to the crucial importance of text to give the tokens copyright protection, whether the tokens are story tokens or standalone tokens.

The benefit of having limited edition digital books to purchasers, is that the books will have and retain a value that normal hard copy or ebooks will not have, due to their being in a limited edition. This will make the limited edition digital books suitable as investments, in the same way that rare books, art and precious metals are used as investments. A first edition rare book like a *Gutenberg Bible*, of which there are 48 copies in the world, sold for \$5.39 million in 1987, *The Canterbury Tales* by Geoffrey Chaucer, with only 12 copies in the world sold for \$7.5 million dollars in 1998 and the first Superman comic known as *Action Comic #1*, one out of 100 known copies sold for \$6 million in April 2024, according to the [Readers Digest rare books worth a fortune The Most Expensive Book Ever Sold-and 24 more worth a Fortune by Elizabeth Yuko](#).

Limited edition digital books available in a limited edition of 10,000 will obviously not sell for anything like the sums in the Reader's Digest article but they are currently available for 0.01 ETH which is around US\$ 26.00 in October 2024. It is quite possible they could increase ten fold in value and be \$260 per token, or go up 20 times and be \$520 per token. This is because they will be among the very first limited edition digital books. The other matter to be considered is we are dealing with limited edition digital books, for which demand would be worldwide, given that the internet is worldwide.

The reason why limited edition digital books should be available in reasonable numbers, such as 10,000, is because the more owners of the books, the more people will be putting their purchases of the books online, on Facebook, Instagram, Twitter etc. This will amount to free advertising of the books, which will increase their value for all owners of the books.

The most appropriate structure for an exchange traded fund investing in limited edition digital books is a grantor trust which involves the exchange traded fund buying the books on behalf of their investors. This enables the investors to have ownership of the books which will encourage them to display their investments on social media. The ownership may be either a beneficial ownership with the legal ownership of the books being held by the exchange traded fund on trust or the investor could have full ownership, with the exchange traded fund acting as a broker, and carrying out sales and purchases on behalf of the investors.

The limited edition digital books could gain value by the books being copied and displayed on social media which is what the purchasers of the books are likely to do if they have some sort of ownership interest in the books, and if other people simply copy and paste the books on social or other media that will also act as advertisements for the books which will enhance their value for all involved. This will make limited edition digital books suitable investments for exchange traded funds and other investors.

Exchange traded funds are particularly suitable for the purchase of digital assets like non fungible and semi fungible tokens for the same reason they are suitable for the purchase of shares on the share market. Both shares and tokens are complicated to buy and sell and expert assistance is useful to facilitate the transactions and to ensure money and assets are transferred legally and without fraud. Tokens are particularly difficult for non professionals to buy and sell due to the necessity of having digital wallets and crypto currency.

Use of Limited Edition Digital Books in advertising for new investors by Exchange Traded Funds

Limited edition digital books may be used by exchange traded funds in advertising to obtain investors for the exchange traded funds. Limited edition digital books, depending upon the context, can be educational and usually contain images which can be significant works of art. This makes them colorful and attractive compared to many non fungible tokens. Non fungible tokens vary a lot. Some are reasonably attractive, pleasant to look at, others are less attractive. Limited edition digital books, as well as being attractive to look at, include text explaining the images, and in many cases the text of different tokens, when read in order, tell a story which can be fiction or nonfiction. Many limited edition digital books are educational, which makes them better than non fungible tokens, which consist solely of images of varying quality.

Limited edition digital books are a development beyond non fungible tokens as they add text and an educational aspect to tokens that non fungible tokens do not have. The educational aspect and that limited edition digital books are a type of book, should give them a much better reputation than non fungible tokens, as education is viewed as desirable and books still have a good reputation in the modern world. Books may have a slightly old fashioned reputation, but as these are digital books, limited edition digital books should not have that problem.

Investing in limited edition digital books will enable exchange traded funds to find an additional market for digital tokens. Non fungible tokens seem to be directed to a younger

audience while educational tokens and art tokens may well appeal to an older audience, who have more money to invest than younger people.

Advertising of Limited Edition Digital Books on social media by investors

The educational quality of limited edition digital books would allow exchange traded funds to use the books in advertising for new investors. It would also encourage investors, if they have an ownership interest in the books, to put copies of the book on social media which will act as advertisements for the books, and increase their value for all owners of the books. The reasons why people post on social media are varied, but a big reason, according to search Labs AI overview, is

“because they seek validation and attention from others, wanting to feel valued and recognized by displaying their achievements, possessions, or experiences, which can boost their self-esteem”

It is arguable that limited edition digital books, due to a combination of their art and educational value will meet this human need much better than, the current non fungible tokens and this will lead to their placement on social media which will meet the needs of the owners and will act as an advertisement for the tokens which will increase their value to the benefit of all the owners.

Type of Exchange Traded Fund to invest in Limited Edition Digital Books

An exchange traded fund investing in limited edition digital books would need to be able to invest in the right crypto currency, for investment in semi fungible tokens. This will mean ether, although other crypto currencies like XRP Ledger, Solana, Bitcoin Cash, Stacks, and Flow could also be used. The other important requirement would be that the investors should be able to claim some personal ownership of the tokens which will encourage them to advertise their ownership on social media. This means grantor trust exchange traded funds would be the right type of exchange traded funds to invest in semi fungible tokens. Grantor trusts usually physically hold assets on behalf of investors which means investors will not have to deal with the complexities of buying crypto currencies and of having a digital wallet to hold crypto currencies and semi fungible tokens. The exchange traded fund can also check all transactions are carried out properly and are recorded correctly on the blockchain.

The advantage of non fungible tokens and semi fungible tokens is that the tokens can be copied all over the internet, but the blockchain can show who the true owner or owners are. It is like owning an original artwork, like the Mona Lisa, and although it can be copied all around the world, the original still has enormous value. The advantage of semi fungible tokens over non fungible tokens, is that with non fungible tokens there is only one owner to put their token on

social media, while with semi fungible tokens many owners can put copies of their tokens on social media, which has the effect of advertising and increasing the value of the tokens.

Reputation of Non Fungible Tokens

Non fungible tokens have a poor reputation. They have been accused of causing environmental harm, of having poor copyright protection, of being vulnerable to link rot when they are not stored on the blockchain due to the size of the files, of having poor liquidity, of being vulnerable to fraud for example when copies of non fungible tokens have been listed and sold by people who are not the owners, of different platforms having different verification standards for creators and for listings and poor buyer protections. Many of these accusations are unjustified and some have been rectified by the use of the ERC-1155 token standard, for example by the use of semi fungible tokens.

The matter of environmental harm has largely been fixed by the use of the ERC-1155 token standard as it enables large numbers of tokens to be minted for the cost of minting a single non fungible token under the ERC-721 standard. It also allows large numbers of tokens to be transferred in a single transaction saving massively on gas fees and the transfer security function on the ERC-1155 standard allows the reclaiming of tokens delivered to the wrong address. The transfer security function also logs every step in a token's life cycle from minting to burning, greatly increasing copyright protection. Concerning link rot, tokens should obviously be stored on the blockchain and this is vastly cheaper with the ERC-1155 token standard. Poor liquidity can be solved by copies of tokens being placed on social media which will act as advertisements for the tokens and increase demand for the tokens. The true owners of tokens are protected from fraud by their listing on the blockchain while purchasers obviously need to exercise caution when buying, or get professional help, for example by buying through an exchange traded fund. Different platforms may well have different verification standards for creators and for listings, but it is for buyers to ensure they purchase on a reputable platform or obtain professional assistance when purchasing tokens. It is no different from, for example, when buying a house, where professional assistance from a lawyer is usually used to carry out the transaction. While some of the criticisms of tokens are unjustified and others have been dealt with by the development of the ERC-1155 token standard, a further way of improving the reputation of tokens is by creating educational tokens, using respectable, well established art, and text to tell a story, whether fiction or nonfiction, as can be done with limited edition digital books.

Limited edition digital books, created using the ERC-1155 token standard, are the future of blockchain tokens. Limited edition digital books would be a good investment for purchasers of digital assets due to their status as being educational and due to their use of famous artworks. This would make them useful to exchange traded funds for advertising to attract investors to their funds and investors with an ownership interest in the limited edition digital books would put them on social media which will act as advertisements for the limited edition digital books and further increase their value to the benefit of all owners of the limited edition digital books.

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