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## The Rise and Fall of Eastman Kodak: Looking Through Kodachrome Colored Glasses

Peter A. Stanwick<sup>1</sup>, Sarah D. Stanwick<sup>2</sup>

<sup>1</sup>Department of Management/Auburn University, United States

<sup>2</sup>School of Accountancy/Auburn University, United States

Corresponding Author: Peter A. Stanwick

**ABSTRACT:** Eastman Kodak is a truly iconic American brand. Established at the end of the nineteenth century, Kodak revolutionized the photography industry by letting every consumer have the ability to develop their own personal pictures at a low cost. However, Kodak stubbornly continued to embrace film photography long after consumers had shifted to digital based photography. In 2012, Kodak was forced to declare Chapter 11 bankruptcy due to its inability to generate positive cash flows in an industry which had moved beyond film photography.

In an attempt to reverse its declining financial performance, Kodak introduced products such as the revised Super 8 camera, a smart phone, cryptocurrency, bitcoin mining and the development of chemicals for generic drugs. All of these new product introductions have failed or have been suspended. In addition, there are questions as to whether the real motive of these “new” product innovations was to be used to aid in the financial recovery of Kodak or were these actions based on manipulating Kodak’s stock price for the personal gain of its executives. This article concludes by asking the question whether or not it is now time for Kodak to permanently close down its operations.

**Keywords:** Eastman Kodak, Film Photography, Digital Photography, Innovation, Stock Manipulation

### I. INTRODUCTION

In 1880, George Eastman developed the first photographic dry plates to be used in the mass production of the development of photographs. These dry plates could be manufactured and then sold to other photographers. This revolutionized the photography by allowing photographs to be developed globally.

In 1892, Eastman incorporated the Eastman Kodak Company which focused on a number of diverse activities related to the photographic industry, including photographic based chemicals, materials, and film. Through this extensive diversification of its products, Kodak would become the dominant player in the photography industry around the world.

Kodak structured its operations based on four fundamental principles: focusing on the customer, the development of a low-cost mass production process, worldwide distribution, and extensive advertising. The global strategy of a simplified process and the low cost of developing pictures resulted in millions of customers being able to buy their own camera and capture their own personalized images permanently. With the slogan of “you press the button, we do the rest”, Eastman revolutionized how images were captured in societies around the world for over a century. [1]

At this peak, Kodak controlled 80 percent of the market share of the photographic film market in the United States and 50 percent of the market globally. It was a dominant corporate citizen in its hometown of Rochester, New York. [2]

### II. DIGITAL PHOTOGRAPHY: THE BEGINNING OF THE END

In what surely would be categorized as the ultimate ironic twist, Kodak had invented the replacement of film in photography which would lead to the ultimate demise of Kodak. In 1975, Steven Sasson, who was an electrical engineer at Kodak, invented the first digital camera. Sasson stated that “My prototype was big as a toaster, but the technical people loved it...But it was filmless photography, so management’s reaction was,

‘that’s cute but don’t tell anyone about it.’” Kodak has sealed its fate by ignoring this revolutionary invention. Since all the Kodak executives had a background in running a film-based company, they did not understand that digital photography would be the ultimate disruptive innovation in the industry. [3]

By being film-centric, Kodak ignored the warning signs that the photography would change forever with the adoption of digital photography. Not only was this type of photography more convenient, but it was also cheaper. Furthermore, it allowed the users to take hundreds, if not thousands, of pictures of the same image or event and then immediately determine which pictures to save and which ones to delete. In addition, digital photography allowed the easy transfer of images electronically from one source to another. With the explosion of social media, users demanded instantaneous access to pictures to be posted immediately after the picture had been taken by the camera or smartphone.

Yet, despite these warning signs, Kodak continued to rely on its film business for its ever shrinking level of profitability. Its famous Kodachrome film, the ultimate standard for both amateur and professional photographers, was not discontinued until 2006 long after consumers had already shifted to digital images. [2]

### III. POST-BANKRUPT KODAK

In January 2012, Eastman Kodak filed for Chapter 11 bankruptcy protection due to its chronic negative cash flow problems. The filing by the company that was 131 years old was not a shock to investors since it was unable to adapt to the changing competitive landscape in the photography industry.

The first major challenge to Kodak’s financial performance was the challenge of lower priced competitors such as Fujifilm. While Kodak was considered by most customers as the highest quality film processor, Fujifilm was able to offer similar quality photographs at a cheaper price to the customer. As the price war between Kodak and Fujifilm impacted Kodak’s level of profitability, it was then hit with the second punch of letting its customers slip away to digital photography without a competitive response. While continuing on with film-based photography, negative cash flows forced Kodak to abandon any new investments in film technology in 2003.

Between 2004 and 2011, Kodak was only able to only report one full year of profit. Due to lack of growth opportunities in the film market, Kodak was forced to resort to selling over one thousand digital imaging patents to generate positive cash flow.[4] The cannibalistic nature of this action was a signal to investors that Kodak had given up the fight of being relevant in the personal photography market. The liquidation of its only viable assets demonstrated that Kodak would not be able to make a recovery in a market which it had dominated for over a century. Kodak’s revenue in 1990 was \$19 billion and had shrunk to \$2 billion by 2015. At its peak, Kodak had employed 145,000 people which had whittled down to 8,000 by 2015.[5]

### IV. SEEKING A BRAVE NEW WORLD: PART 1- THE RE-INTRODUCTION OF THE SUPER 8 CAMERA

In the beginning of 2016, Kodak announced that it was going to revive its iconic Super 8 video camera. Despite the worldwide dominance of smart phones as the means to record events, Kodak believed that resurrecting a product that first went on sale in 1965 and had not been in the marketplace for over thirty years was going to be an effective competitive strategy.

The Super 8 Camera records movies using film cartridges and was reintroduced with a digital LCD flip-out panel as a viewfinder. A significant limitation for Kodak in using film cartridges is that the sound is not recorded on the film. The sound is recorded and stored using SD memory cards that are located in the rear of the camera. In 1973, Kodak’s Super 8 camera did record the sound with the film when a magnetic strip was added to the film. In 1997, it was determined that the substance used to bond the strip to the film was hazardous and the magnetic strip was discontinued.

The re-introduced Super 8 cameras used film cartridges that contained 50 feet of film. When filming occurs at 24 frames a second, the 50 feet of film would yield a total of two and a half minutes of recording. At the initial unveiling of the product in 2016, the estimated list price of the camera was going to be between \$400 and \$750 and the film would cost between \$50 and \$75 per cartridge which included processing.[6]

Two years later the Super 8 was still not in the marketplace, yet the price point of the camera had changed. In January 2018, Kodak announced that the Super 8 camera would now sell for between \$2,500 and \$3,000. This shift in pricing negated any competitive advantage Kodak had for its product based on price. In the

\$2,500 to \$3,000 price range, competitor products from Sony, Canon and Panasonic yielded state of the art technology which produced such high-quality video that it could be used for television or movie production. These competitor camera can also edit all the video with a basic computer. Alternatively, the Super 8 camera requires film editing equipment which can cost thousands of dollars. [7]

## V. SEEKING A BRAVE NEW WORLD: PART 2 -THE INTRODUCTION OF THE KODAK EKTRA SMARTPHONE

In late 2016, Kodak announced the introduction of its smartphone, the Kodak Ektra. Priced at \$399.99, the camera-centric phone did not get off to a good start. Kodak admitted that the phone was not compatible with major mobile networks in the United States such as Verizon, Sprint or US Cellular, but was compatible with AT&T and T-Mobile.

The device was built by the British based company Bullitt Group which licensed the Kodak name. Kodak's CEO at the time, Jeffrey Clarke commented that Ektra had drawn a lot of interest from those who appreciate photography and the device's "...ability to capture images like a camera but with the ease of a phone was a natural appeal to all photography enthusiasts".

However, the review by consumer electronics and technology publisher CNET was not as kind with the features (or lack thereof) of the Ektra. In its review, it said the Ektra was a "disappointment" and that it did not even take great pictures. The review also highlighted that the Ektra had a clunky interface and had a poor battery life. [8]

## VI. SEEKING A BRAVE NEW WORLD: PART 3- THE INTRODUCTION TO CRYPTOCURRENCY

In January 2018, Kodak announced that it was entering the world of blockchain technology and cryptocurrency. It presented its branded mining rig called the KashMiner which was operated by the company Spotlite and was licensed by Kodak. The user pays \$3,400 to rent the machine for two years. The machine would search the internet for bitcoin cryptocurrency. Kodak claimed that the KashMiner would yield approximately \$375 worth of new bitcoins every month which would yield \$9,000 over the two year rental agreement. However, the agreement also required that the user of KashMiner pay half of its revenues back to Spotlite and Kodak. [9]

Kodak also announced in the same month that it was planning on developing its own cryptocurrency. Through the use of blockchain, Kodak was going to develop KodakCoin currency to be used for photo copyright and royalty payments for digital photographers. The announcement resulted in a stock price increase of over 300 percent from \$3.13 to \$10.77.[10]

The development of the KodakCoin would allow photographers and their agencies to take greater control of the management of image copyrights. KodakCoin would use blockchain technology to help photographers manage their collection of images by generating a collection of permanent records of ownership. The premise of the KodakCoin system is to give the photographers the ability to upload their images onto a platform owned by Kodak called KodakOne. In this platform, the photographers could create a blockchain-based license for each uploaded image. KodakOne would use web-crawling software to determine if the images of the photographers are being used in violation of the photographers' copyrights. The clients using the images would pay the royalties to the photographers with KodakCoins.

Kodak wanted to receive up to \$20 million in funding by investors for the project but the initial offering was delayed due to verifying the credentials of the potential investors. However, there were other concerns related to the KodakOne and KodakCoin system. Kodak was not providing specific details on what the funding would be used for and there were questions related to why a similar type of system could be designed without the use of blockchain. In addition, a fundamental question was why would the photographers want to be locked into a digital bitcoin payment system instead of just being paid in cash. The SEC had warned the public that securities sold in private offering such as KodakCoins may be difficult if not impossible to resell on the open market. At the time of the delayed initial offering a spokesperson for KodakCoin commented that Kodak believes that its bitcoin tokens will eventually be freely traded and that it may issue additional bitcoin tokens in the future.[11]

Another major concern is that like the KashMiner project, KodakCoin is not actually a Kodak project. The company controlling KodakCoin is WENN Digital which is an American affiliate of a British photography agency that specializes in photo licensing of paparazzi captured images.

A mere 6 months after the announcement of the KashMiner, the project was cancelled. Spotlite and Kodak had received criticism that the promised profits were not achievable and were misleading and called the program a scam. The CEO of Spotlite, Halston Mikhail, had claimed that there would be hundreds of KashMiners at Kodak headquarters in Rochester New York where the machine could run on cheap electricity. At the time of the shutdown of the program, Mikhail stated that 80 miners were fully operational at the Kodak headquarters. In addition, in the calculation of the monthly revenues of \$350, Spotlite did not factor into its revenue calculation that mining difficulty increases monthly which reduces the monthly bitcoin yield.

Once the announcement of the shutdown took place, Kodak backed away from any responsibility for the machine by stating that “While you saw units...from our licensee Spotlite, the KashMiner is not a Kodak brand Licensed product. Units were not installed at our headquarters.”Spotlite’ CEO Mikail’s response to the shutdown was that Spotlite would run its mining operation privately with equipment that is installed in Iceland and would abandon renting the machines to the public. [12]

## VII. A BRAVE NEW WORLD: PART 4- RESURRECTING ITS CHEMICAL BUSINESS

On July 28, 2020, Kodak announced that it won a \$765 million federal government loan under the United States Defense Production Act. The purpose of the loan was to help expedite the development of ingredients in the domestic production of generic drugs including the antimalarial drug hydroxychloroquine which had been claimed by President Trump and others that hydroxychloroquine could be used as treatment of the coronavirus. Kodak’s CEO Jim Continenza stated that “We have a long, long, history in chemical and advanced materials-well over 100 years.”[13]

Kodak stated that it would create a new pharmaceuticals division which would result in the expansion of its facilities in Rochester, New York and Saint Paul, Minnesota. The division would have the capacity to produce up to 25 percent of the active ingredients that are used in generic drugs manufactured in the United States.[14]

On August 5, 2020, United States Congressional Committees were seeking records from Kodak about the details of the \$765 million government loan. A letter sent to Kodak’s Jim Continenza highlighted the concern the committees had on Kodak’s “lack of pharmaceutical experience” as well as the issuing of stock options given to Kodak executives including the CEO before the announcement of the loan was made public. The letter stated that “Although Kodak has experience manufacturing chemicals used in photography, it has not traditionally manufactured chemicals for use in pharmaceutical products.”

In response to the loan, Kare Schultz, the CEO of the generic drug manufacturer Teva Pharmaceuticals commented that “Borrowing money to start up manufacturing in itself does not make manufacturing sustainable...Even if you get the capital at zero interest, that does not mean that you can be cross competitive...I don’t see how it’s plausible.”

The stock options granted to Kodak CEO Continenza was worth \$16 million with over a quarter of those options being exercisable the day of the grant. By being exercisable, the CEO could immediately cash in those options. Kodak stock was trading at \$2.62 on July 27 and skyrocketed to \$60 when the loan announcement occurred.[15]

In total compensation, Continenza stood to gain more than \$95 million if he was able to exercise all his stock options that had accumulated over the previous 2 years after the loan announcement. When Continenza became CEO in February 2019, he was granted stock options of 2.05 million shares at a price range from \$3.03 to \$12. In May 2019, Kodak issued Continenza additional stock options of 1.75 million which also were in the same price range of \$3.03 to \$12. Just three days after the announcement of the loan, Continenza would have realized a gain of \$51.5 million from the initial stock options and an additional \$44 million from the second round of stock options if they were exercised.[16]

On August 7, 2020, Kodak announced that it would conduct a review of recent activity by the company and the internal connections Kodak had with the government loan. Kodak’s Board of Directors had established a special committee to investigate the steps in the loan process. While Kodak argued that developing chemicals was a core competence, industry experts argued that it can be very difficult to make money from manufacturing generic chemical ingredients, Willy Shish, who previously ran Kodak’s consumer operations and is now a

Harvard Business School professor, stated that mixing chemicals isn't difficult, what is difficult is doing it with enough profit margin to be sustainable. [17]

On August 9, 2020, the federal government loan to Kodak was suspended due to investigations from Congress and the Securities and Exchange Commission (SEC). The U.S. International Development Finance Corporation (DFC) which had provided the loan tweeted that "recent allegations of wrongdoing raise serious concerns. We will not proceed any further unless these allegations are cleared." The SEC was investigating how and where the information was disclosed to the public pertaining to the loan which resulted in an immediate spike in the Kodak stock price. Kodak had shared information about the loan agreement with local media outlets before the official public announcement. As a result, the deal was leaked to the public which resulted in an intense demand of Kodak stock. The leaked information was subsequently deleted by the media outlets who had divulged the deal. [18] The following day after the announcement of the suspension of the loan, Kodak's stock lost more than a quarter of its value in one day. [19]

On August 11, 2020, Kodak CEO Jim Continenza stated that he supports the decision of the DFC to stop the government loan. Continenza explained that the preliminary agreement with the government needed more work but that Kodak has the capability to develop those chemicals based on its' history in chemicals manufacturing and its vast infrastructure. In a regulatory filing, Kodak admitted that its ability to make a profit on the development of these chemicals is based on its capability to compete with low-cost competitors located in China and India. If Kodak is not able to compete on price, its "subsidiary may not be able to distribute profits" to the parent company which would result in the default of the loan repayment. [20]

On October 19, 2020 Jim Continenza continued to defend Kodak's handling of the government loan debacle and was adamant about continuing to move ahead with making of the drug ingredients regardless of whether it receives any financial support from the United States government or not. [21]

On November 11, 2020, Kodak admitted that five former executives were able to collect millions of dollars by selling stock options which they did not own after the announcement of the federal loan. Kodak's CFO David Bullwinkle stated that Kodak had discovered deficiencies in its internal controls which resulted in an "unauthorized issuance" of the company's stock. The former executives were able to exercise 300,000 stock options which were forfeited and no longer valid. The exercising of the stock option resulted in Kodak incurring approximately \$5.1 million in compensations expenses. [22]

## VIII. SUMMARY

Eastman Kodak was an iconic American Brand which represented ingenuity and innovation. In its long history, it was a pioneer in the development of numerous innovations in the photographic industry which allowed consumers the opportunity to make personal pictures cheaply. By ignoring the warning signs from fierce competitors and the adoption of digital photography, Kodak was left behind as other companies developed a more synergistic link with the needs of customers.

In an attempt to make numerous comebacks which may or may not have been motivated by attempts to manipulate its stock price, Kodak reintroduced a video camera which used technology that was over 50 years old. It introduced a smartphone which had no competitive advantage versus the market leaders. It introduced a "scam" of promising consistent returns on bitcoins which was not possible to achieve. It introduced a program in which photographers would be forced to use Kodak's own coins as payment for copyrighted images. Lastly, it promised to be a major chemical ingredient manufacturer without the experience or economies of scale needed to ensure profitability. Kodak is slowly dying without any foreseeable change for a viable recovery in the future. Kodak should perhaps get some guidance from its founder.

In 1932, George Eastman, the founder of Eastman Kodak was suffering from lumbar spinal stenosis which created intense pain and discomfort. Eastman's quality of life was deteriorating and there was no hope that he would be able to ever recover from the disease. As a result, on March 14, 1932, he committed suicide by shooting himself in the heart. His suicide note was simple and to the point "To my friends. My work is done. Why wait?". [23] This could be considered sage advice for Kodak. Is it time for Kodak to put itself out of its own misery and discontinue its operations permanently?

## REFERENCES

- [1] <https://www.kodak.com/en/company/page/history>

- [2] T. Viki, On The Fifth Anniversary of Kodak's Bankruptcy, How Can Large Companies Sustain Innovation?,*Forbes*, 2017, January 19.
- [3] C. Deutsch, At Kodak, Some Old Things Are New Again,*The New York Times*, 2008, May 2.
- [4] M. De La Merced, Eastman Kodak Files for Bankruptcy,*The New York Times*, 2012, January 19.
- [5] Q. Hardy, At Kodak, Clinging to a Future Beyond Film,*The New York Times*, 2015, March 20.
- [6] D. Demolder, Kodak Revives Super 8 With Part-Digital Cine Camera,*Digital Photography Review*, 2016, January 6.
- [7] A. Cranz, I'm Sorry Kodak Wants How Much For Its New Super 8 Camera?,*Gizmodo*, 2018, January 16.
- [8] T. Clausen, Kodak Ektra Won't Work On Verizon, Other Popular Networks,*Democrat & Chronicle*, 2017, May 17.
- [9] M. Sigalos, This \$3,400 Bitcoin-Mining Machine is a Cornerstone of Kodak's Crypto Pivot,*CNBC.com*, 2018, January 10.
- [10] L. Moyer, Kodak Shares Have More Than Tripled Since Company Announced its New Cryptocurrency 'KodakCoin',*CNBC.com*, 2018, January 10.
- [11] K. Roose, Kodak's Dubious Cryptocurrency Gamble,*The New York Times*, 2018, January 30.
- [12] Anonymous, Kodak Bitcoin Mining Scheme Evaporate,*BBC News.com*, 2018, July 16.
- [13] R. Levy, Kodak Shifts Into Drug Production With Help of \$765 Million U.S. Loan,*The Wall Street Journal*, 2020, July 28.
- [14] J. Drucker and E. Gable, Kodak C.E.O. Got Stock Options Day Before News of Loan Sent Stock Soaring,*The New York Times*, 2020, July 31.
- [15] R. Levy and G. Rogow, Lawmakers Seek Records on Planned Kodak Federal Loan,*The Wall Street Journal*, 2020, August 5.
- [16] T. Francis and G. Rogow, Kodak's Stock Surge Turned Insiders' Options Into Potential Windfall,*The Wall Street Journal*, 2020, July 31.
- [17] P. Ziobro, So, What Does Kodak Do These Days? A Decade of Pivots Before a Huge Federal Loan,*The Wall Street Journal*, 2020, August 7.
- [18] R. Levy, U.S. Agency Sidelines Planned \$765 Million Loan to Kodak Amid Probes, *The Wall Street Journal*, 2020, August 9.
- [19] R. Levy, Kodak Shares Fall as Planned \$765 Million Loan is Put on Ice,*The Wall Street Journal*, 2020, August 10.
- [20] R. Levy, Kodak Chief Says Company Supports Federal Decision to Halt Loan,*The Wall Street Journal*, 2020, August 11.
- [21] R. Levy, Kodak to Push Forward on Making Drug Ingredients Despite U.S. Loan Troubles,*The Wall Street Journal*, 2020, October 19.
- [22] K. Chin, Kodak Says Ex-Executives Sold Stock Options They Didn't Own,*The Wall Street Journal*, 2020, November 11.
- [23] <https://www.openculture.com/2013/08/the-very-concise-suicide-note-by-kodak-founder-george-eastman-my-work-is-done-why-wait-1932.html>