

Benjamin Samuel, *Dow Jones Industrial 30+1*, transparency in lightbox, Edition 5+2AP

## PRESS RELEASE

### Flash on the Crash

- *Dow Jones Industrial 30+1* is a light work created by new media artist Benjamin Samuel based on the entire stock market data of the 30 Dow Jones listed companies in 2008, the year of the global financial crisis and stock market crash.
- The corresponding work entitled *Deutscher Aktienindex 30+1* is based on the entire stock market data of the 30 DAX (German Stock Index) listed companies in 2008.
- Both works will be exhibited at the Portal Art Fair in SoHo, New York City, May 3 - May 8 2017. Press Preview to be held on May 2, 11am - 3pm. Opening Reception on May 3, 6-9pm.

New York, NY — April 27, 2017 — The economy has come a long way in the nine years since the 17-month long global downturn began in October of 2008. During the crash, the Dow Jones Industrial Average, an index which shows how thirty large US-based publicly owned companies

traded in the stock market, dropped by a stunning 54%. The entire world was moving into the "Great Recession". The economy improved slowly during the Obama administration, largely due to a massive stimulus program and near 0% interest rates, which fueled a 13,500 point gain in the Dow over the course of his presidency. As the stock market crash nears its 10th anniversary, all seems but forgotten.

"During a time when the Dow Jones reaches one milestone after another, in a post-election rally which helped the Dow reach a closing record of 20,000 points on January 25, 2017, remembering and reflecting on the historical crisis of the recent past seems more important than ever" says the artist Benjamin Samuel. "The crisis of 2008 was not only the first bust I experienced firsthand but it also affected me personally. I created my works not as criticism, but as a cautious reminder to everyone that things were and can always be different."

Benjamin Samuel first became fascinated by the stock market in early in 2009, as the Dow was approaching its low point of 6,443.27. "As someone who is interested in math, numbers and programming, the abstract nature of the stock market very much appealed to me", Benjamin Samuel explains, "after all, the stock market is man-made. The tension between the abstract nature of the stock market and the very real life stories you would see on the news prompted me to create my work".

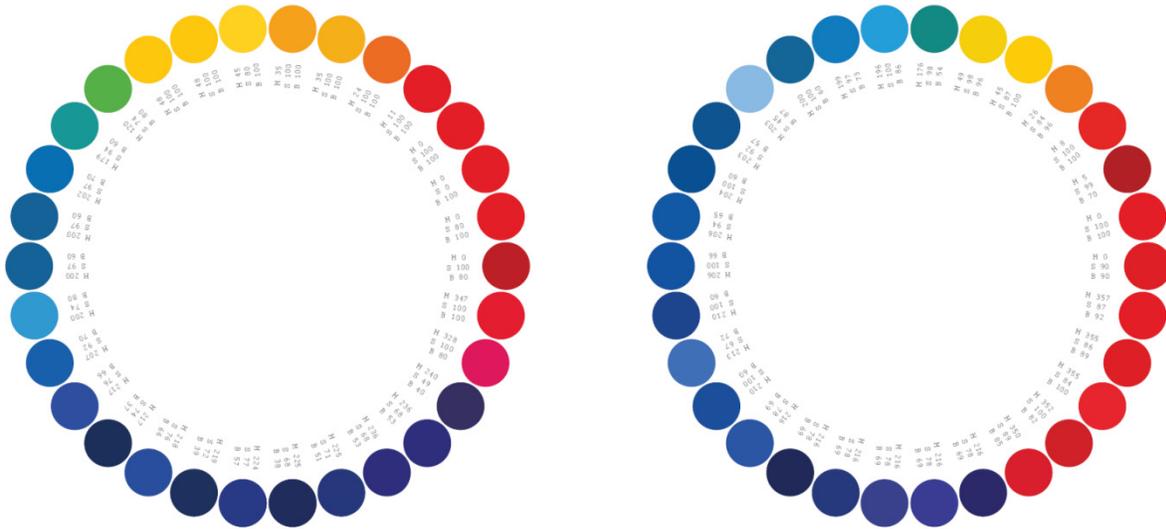
DATE	OPEN	HIGH	LOW	CLOSE	VOLUME	ADJ CLOSE
Jan 02, 2008	13.261,82	13.279,54	12.991,37	13.043,96	239.580.000	13.043,96
Jan 03, 2008	13.044,12	13.137,93	13.023,56	13.056,72	200.620.000	13.056,72
Jan 04, 2008	13.046,56	13.046,72	12.789,04	12.800,18	304.210.000	12.800,18
Jan 07, 2008	12.801,15	12.884,15	12.733,84	12.827,49	306.700.000	12.827,49
Jan 08, 2008	12.820,90	12.906,42	12.565,41	12.589,07	322.690.000	12.589,07
Jan 09, 2008	12.590,21	12.738,64	12.501,76	12.735,31	332.900.000	12.735,31
Jan 10, 2008	12.733,11	12.931,29	12.632,15	12.853,09	325.330.000	12.853,09
Jan 11, 2008	12.850,74	12.851,14	12.543,87	12.606,30	301.890.000	12.606,30
Jan 14, 2008	12.613,78	12.794,57	12.613,70	12.778,15	245.370.000	12.778,15
Jan 15, 2008	12.777,50	12.777,50	12.488,76	12.501,11	339.700.000	12.501,11
Jan 16, 2008	12.476,81	12.613,13	12.392,27	12.466,16	500.040.000	12.466,16
Jan 17, 2008	12.467,05	12.517,61	12.125,56	12.159,21	439.830.000	12.159,21
Jan 18, 2008	12.159,94	12.341,54	12.022,48	12.099,30	483.300.000	12.099,30
Jan 22, 2008	12.092,72	12.092,72	11.634,82	11.971,19	506.500.000	11.971,19
Jan 23, 2008	11.969,08	12.276,67	11.644,81	12.270,17	536.520.000	12.270,17
Jan 24, 2008	12.272,69	12.399,18	12.241,80	12.378,61	387.900.000	12.378,61

*Raw data – daily stock quotes*

In order to create *Dow Jones Industrial 30+1*, Benjamin Samuel gathered the closing prices of all Dow Jones listed companies for the entire year 2008 from the internet, a total of 7,874 stock quotes, and began writing software code that would visually transform and represent the data.

He carefully researched which companies were listed in the index, and assigned a hue to each company based on its primary company color. His program would read in all the data, and arrange it in a simple matrix. Each row in the work represents a single trading day: the top row represents January 2nd (the stock exchange is closed on New Year's Day), followed by a row for each trading day, ending at the bottom with December 31st, 2008. In each row, laggards and leaders (investment terms denoting stocks which are under- and over performing) of the 30 listed companies are sorted from left to right. The performance of the index itself is represented by the color white and included in each row, giving the work its title *Dow Jones Industrial 30+1*.

As each stock for each company has a fixed hue assigned, Benjamin Samuel proceeded to link and control the brightness of the color based on the price of the stock. Higher stock prices translate to brighter colors, lower stock prices to darker colors. Once his algorithm was set up, his computer code proceeded to translate the data into a visual image.



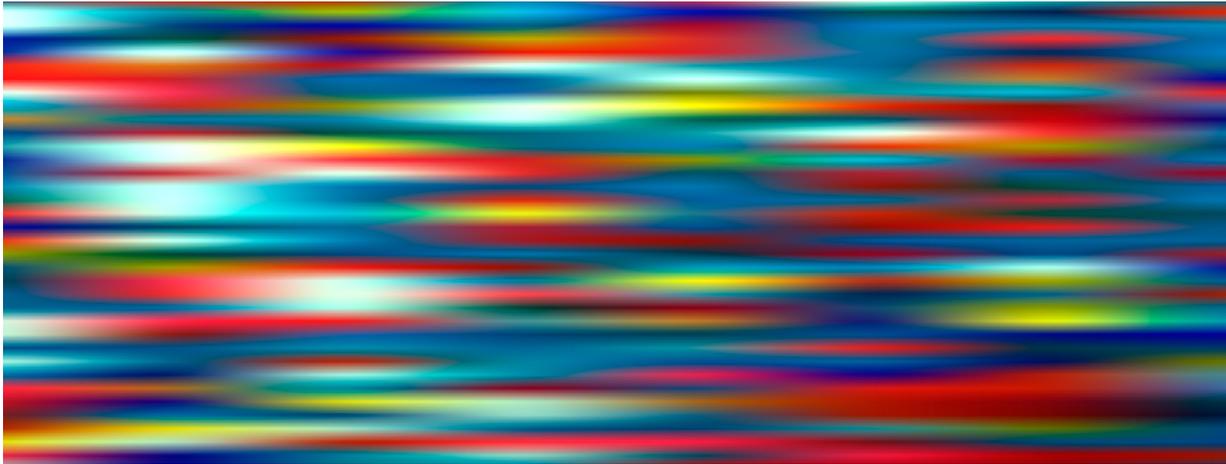
*Color wheel – Company colors for DAX (left) and Dow Jones (right)*



*The Dow Jones in 2008 – the level of brightness linked to the price of the stock quote*

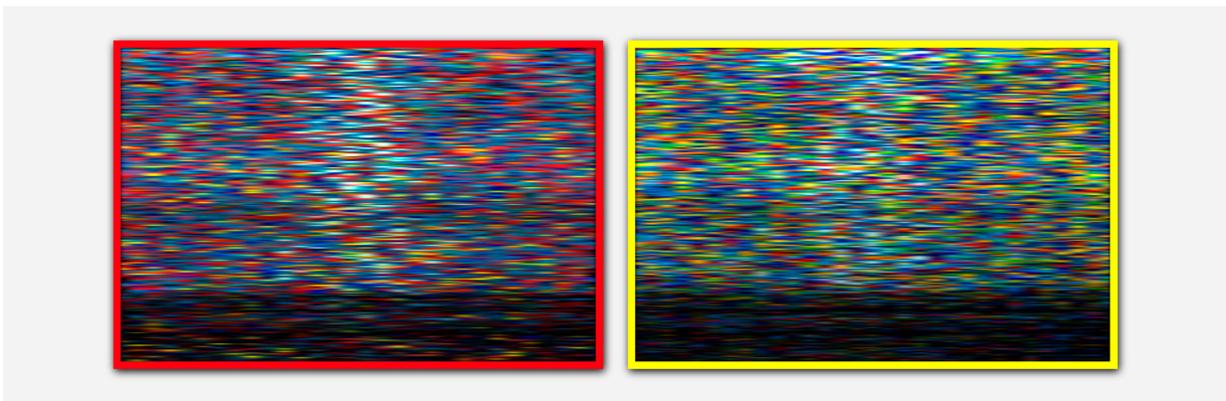
Benjamin Samuel also applied a smoothing function over the image data, which gives the final work a calming and impressionistic quality. It is reminiscent of a flowing pool of water, which prompted the late German art and architecture critic Dieter Bartetzko to draw parallels to Claude

Monet's water lilies<sup>1</sup>. "In my work, I am interested in man-made creations", the artist explains. "When I had first run the algorithm, I was fascinated at how random the arrangement appears, apart from the obvious shadowy interruption of the crash. As humans, we have a tendency to see patterns in the most random objects and even where none exist. I was expecting to see a pattern emerge in the visualization of the stock market data, but was mesmerized that a man-made phenomenon, based at least in part on rational choices, appears so perfectly random, like the gentle ripples in a pool of water."



*Close up of "Dow Jones Industrial 30+1"*

Benjamin Samuel conceived this work as a pair meant to be exhibited together. His corresponding work *Deutscher Aktienindex 30+1* applies the identical technique on the stock market quotes of the 30 companies listed in the German stock market index DAX. While the company colors differ, the general composition of the two works is similar. This is not surprising, since the performances of today's global stock markets are so tightly interlinked.



*Dow Jones Industrial 30+1 (left) and Deutscher Aktienindex 30+1 (right), side by side*

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<sup>1</sup> "Should we call them pictures? Prints? Analyses? A variety of holograms? This also applies to his computer creation called ... 'Dow Jones Industrial 30+1'. Unlike his firmly structured "Goldberg Variations", here, the painterly style - can one even say this of a machine? - is rather soft and impressionistic. The colors slide into each other, one thinks of precious silk, of excerpts from Monet's Water Lilies, in prosaic moments, perhaps, also of underwater cameras with heavily impaired optics or of LSD. One would never have thought, though, that such gentle tides would represent the nervous twitches of our capitalist markets?", Frankfurter Allgemeine Zeitung, 10 July 2010, [http://benjaminsamuel.net/wp-content/themes/bs/pdf/100710\\_FAZ\\_Demiurg\\_English.pdf](http://benjaminsamuel.net/wp-content/themes/bs/pdf/100710_FAZ_Demiurg_English.pdf)

Benjamin Samuel was also interested in the narrative qualities of his abstract work. Essentially chronicling each single trading day of an entire year, moments in the image relate to very real life and dramatic events. "Looking at my works, it is as though one looks at reality through a distorted mirror", Benjamin Samuel explains. For example, there are bright yellow streaks in *Dow Jones Industrial 30+1* in the shadowy lower third that represents the crash. These yellow speckles represent the only stock which defied the crash as panicked traders sought it out: McDonalds. In *Deutscher Aktienindex 30+1* there is a blue spot on the right which represents the day in October 2008 on which scared traders prompted the Volkswagen stock to soar from EUR 210 to just over EUR 1,000 a share within a single trading day, briefly making it the most valuable company in the world. In the wake of the event, a German billionaire committed suicide, fueled by the losses sustained from shorting the stock. Like McDonalds in the American index, Volkswagen was, in fact, the only stock in the German stock index that defied the crash.

Benjamin Samuel developed the final computer generated images on a transparency film, which are framed and backlit in large custom designed LED light boxes. The artist chose to paint the frames in special fluorescent signal paints, red for the Dow and yellow for the DAX, which intensifies the vivid electric play of colors of the image.

Both works will be exhibited at the Portal Art Fair in New York City in the SoHo neighborhood of Manhattan, May 3-8, 2017 at 435 Broome Street (between Broadway and Crosby).

## 'Arrays of Light' Series and Catalogue of Works

*Arrays of Light* is a series of currently five paired light installations by Benjamin Samuel. The artistic impetus of the series is the appreciation of our humanistic, cultural and artistic heritage. In an attempt to unravel the hidden rules that govern these phenomena, Benjamin Samuel draws inspiration from diverse subject areas that interest him including music (Bach's Goldberg Variations and Beethoven's Diabelli Variations), literature (the works of Shakespeare and Poe), film (the films of Hitchcock and Kubrick), comics (Astérix and Tintin) and stock markets (DAX and Dow Jones), seen as a reflection of our society.



In September 2015, Benjamin Samuel's catalog of works ARRAYS OF LIGHT was published by DISTANZ<sup>2</sup>, Berlin. The works are presented thematically, explained and derived historically and enriched with casual and humorous conversations between Benjamin Samuel and individuals who grapple with the same works scientifically and artistically, such as with the American jazz pianist Uri Caine, who recorded the Goldberg and the Diabelli Variations, with Anthea Bell, the British translator of the Astérix comics and with the LA-based film critic Dan Auiler, author of the book "Vertigo: The Making of a Hitchcock Classic". The foreword was written by Prof. Dr. Henry Keazor, art historian at the University of Heidelberg, who had published and edited a book on Alfred Hitchcock and the Arts in 2013.

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<sup>2</sup> Arrays of Light Catalogue of works, DISTANZ Publishers Link:

<http://www.distanz.de/de/books/new-publications/detail/backPID/new-publications/products/benjamin-samuel.html>

## About Portal Art Fair

Portal, featuring dozens of artists, will be open to the public May 3-8 in the SOHO neighborhood of NYC at 435 Broome Street, NYC (between Broadway and Crosby). Following its successful inaugural edition in 2016, Portal will return in a new location in Soho. Open to the public from May 3 – 8, 2017, Portal will transform the 2000-square-foot street level gallery at 435 Broome Street into vibrant artist space with the work of approximately 30 artists from the U.S. and abroad. Featured artists were selected through both an open call and an invitational process geared toward artists who have previously shown with 4heads—the nonprofit responsible for organizing Portal as well as Governors Island Art Fair. For more info, visit: [www.4heads.org/portal](http://www.4heads.org/portal)

### Location,

Portal takes place at 435 Broome Street, New York, NY 10013

### Dates and Hours:

Open May 3-8, 2017, 11am - 6pm, Admission is free.

A **Press Preview** will be held on May 2, at 11am - 3pm.

A celebratory **Opening Reception** will be held on Wednesday, May 3, from 6 - 9pm.

Both events require an RSVP at [alina@paveconsult.com](mailto:alina@paveconsult.com)

## About Benjamin Samuel



Benjamin Samuel is the nom de plume of Benjamin Samuel Koren. He was born in 1981 in Frankfurt, grew up in Miami, Florida and studied architecture, film and music at New York University, the University of Miami, the Architectural Association in London as well as the University of Applied Arts in Vienna. He currently lives and works in New York. In 2012, the German Film Museum acquired two light installations by the artist, HITCHCOCK 30 and KUBRICK 13+9+10, which are permanently exhibited in the foyer of the museum in Frankfurt. He also works as a specialist for complex geometries on art and architectural projects, having recently completed his work on the Great Hall of the Elbphilharmonie Concert Hall in Hamburg by Herzog & de Meuron. For more information, please visit [www.benjaminsamuel.net](http://www.benjaminsamuel.net)

## Contact

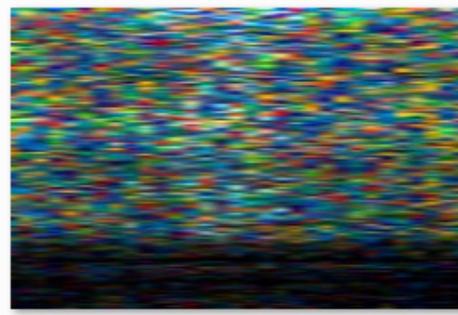
Email: [info@benjaminsamuel.net](mailto:info@benjaminsamuel.net)  
Web: [www.benjaminsamuel.net](http://www.benjaminsamuel.net)  
Phone: 917 – 280 – 0296

## Picture Credits

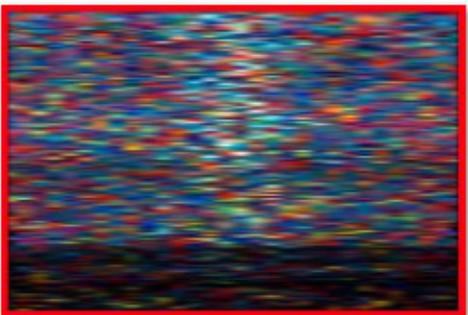
All images © Benjamin Samuel and are available free of charge for editorial purposes. A copy of your editorial coverage or a brief summary of the intended use would be appreciated.



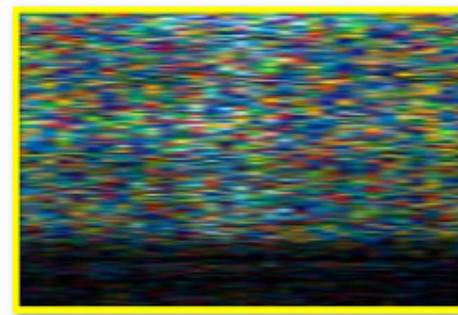
**01\_Dow-Jones-Industrial.png**  
Full view of Dow Jones Industrial 30+1  
3600x2400px



**02\_Deutscher-Aktienindex-30.png**  
Full view of Deutscher Aktienindex 30+1  
3600x2400px



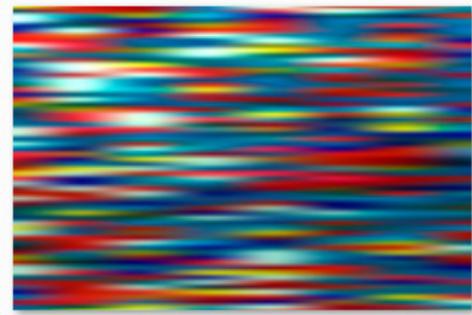
**03\_Dow-Jones-Framed.tif**  
Framed Dow Jones Industrial 30+1  
1795x1204px



**04\_Deutscher-Aktienindex-Framed.tif**  
Framed Deutscher Aktienindex 30+1  
1795x1204px

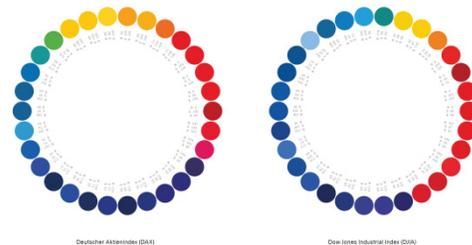


**05\_Side-by-Side.tif**  
 Dow Jones Industrial 30+1 and  
 Deutscher Aktienindex 30+1 side by side  
 2000x806px



**06\_Dow-Jones\_Close-Up.png**  
 Close up of Dow Jones Industrial 30+1  
 877x854px

Date	Price	Volume	Price	Volume
Dec 01, 2008	11,214.02	11,279,24	11,200.36	270,000,000
Dec 02, 2008	11,194.61	11,207,00	11,203.00	100,000,000
Dec 03, 2008	11,184.24	11,284,43	11,212.00	174,000,000
Dec 04, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 05, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 08, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 09, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 10, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 11, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 12, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 15, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 16, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 17, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 18, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 19, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 22, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 23, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 24, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 29, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 30, 2008	11,181.18	11,284,43	11,212.00	174,000,000
Dec 31, 2008	11,181.18	11,284,43	11,212.00	174,000,000



**07\_Raw-Data\_Stock-Quotes.pdf**  
 Stock quotes, Raw data  
 Vector file

**08\_Dow-Jones-Colors.pdf**  
 Company colors  
 Vector file



**09\_Dow-Jones-Diagram.pdf**  
 The Dow Jones in the year 2008  
 Vector file



**10\_DOW\_20sec\_Animation.mp4**  
 Zoom Out Animation of Dow Jones  
 Industrial 30+1, 1280x720px, 20sec



11\_DAX\_20sec\_Animation.mp4  
Zoom Out Animation of Deutscher  
Aktienindex 30+1, 1280x720px, 20sec



12\_Arrays-of-Light\_Benjamin-Samuel.jpg  
Book Cover Arrays of Light  
DISTANZ Publishers  
2493x3426px



13\_Portrait\_Benjamin-Samuel.jpg  
Portrait of Benjamin Samuel  
4535x3624px