Overview

INTRODUCTION

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Motivation

Is technical analysis profitable in bitcoin markets?

1. Why bitcoin?
2. Why technical analysis?

Why bitcoin?

Bitcoin

- Introduced in 2008 (Nakamoto, 2008)
- Electronic payment system based on cryptographic proof instead of trust
- No need for third parties
- instantaneous, low cost, anonymous worldwide payments

WHY BITCOIN?

Figure: Total market capitalization and 24h trade volume of the cryptocurrency market over time.
Source: https://coinmarketcap.com/charts/

WHY BITCOIN?

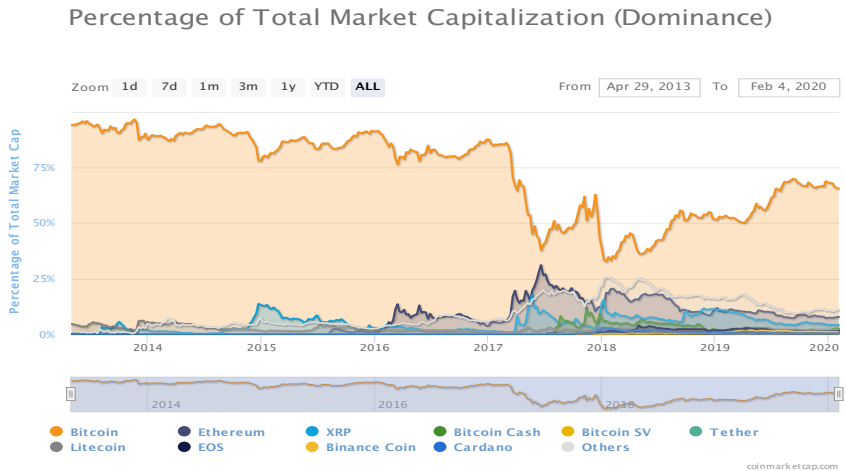

Figure: % of total market capitalization of the cryptocurrency market over time.

Source: https://coinmarketcap.com/charts/

WHY TECHNICAL ANALYSIS?

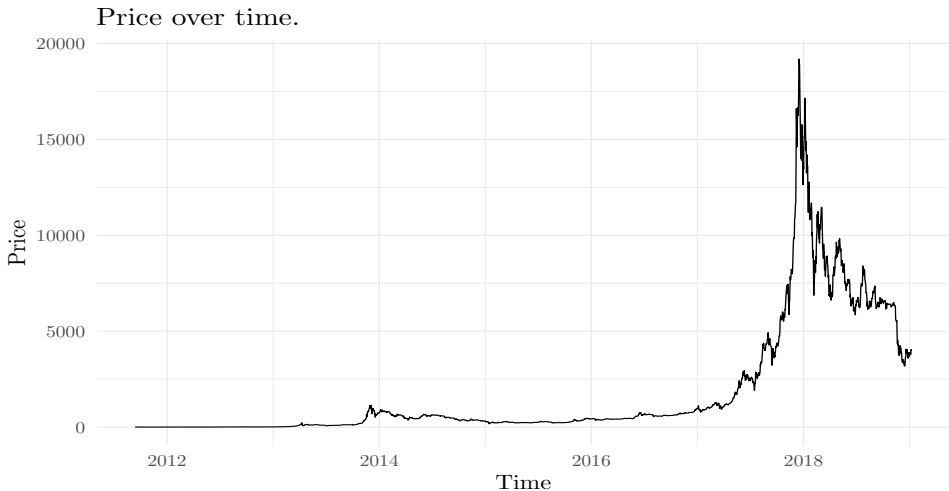

Figure: Price of bitcoin over time.

Why technical analysis?

Technical analysis

Using past prices in order to predict future returns.

- Requires inefficient markets
- Contested by academics, popular with professionals (especially FX)

METHODOLOGY

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DATA

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RESULTS

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FONTS AND LAYOUT

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This is the frame title

With optional frame subtitle

Regular text in the body of the slide is black and rendered in Helvetica sans-serif.

Helvetica has no corresponding math font. Therefore, equations are typeset in Computer Modern sans-serif and are also displayed in plain black:

$$F(x|\mu, s) = \int_{-\infty}^{x} s^{-1} \left(1 + e^{-\frac{v-\mu}{s}}\right)^{-2} e^{-\frac{v-\mu}{s}} \, \mathrm{d}v = \frac{1}{1 + e^{-\frac{x-\mu}{s}}}$$

Emphasis can be added by using **bold** typeface, *italic*, colors or ***any combination***.
More about colors follows later.

The frame title is rendered in Small Caps

The official UGent Powerpoint/Keynote templates have all titles in both ALL CAPS, **bold** and underline.

In my opinion, this combination is somewhat **AGGRESSIVE AND UNPLEASANT TO THE EYE**.

Instead, this theme makes use of Small Caps for all titles and subtitles

Lists and enumeration

Lists of items

This is how a list of unnumbered items looks:

- Item 1
- Item 2
- Item 3

Nested lists of items are possible too:

- Item 1
  - Subitem a
  - Subitem b
- Item 2
  - Subitem a
  - Subitem b

Lists of items

This is how a list of numbered items looks:

1. Item 1
2. Item 2
3. Item 3
4. Item 4
5. Item 5

COLORS

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COLORS

- The offical UGent colors (in RGB) are part of the theme.
- The primary UGent color is ugentblue, and the secondary color is ugentyellow.
- The faculty specific UGent themes can use the faculty color as secondary color.

- **ugentblue**
- **ugentyellow**
- **ugent-lw**
- **ugent-re**
- **ugent-we**
- **ugent-ge**
- **ugent-ea**
- **ugent-eb**
- **ugent-di**
- **ugent-pp**
- **ugent-bw**
- **ugent-fw**
- **ugent-ps**

- Note that every faculty color name refers to the abbreviation of the faculty name.

More about colors

- The main colors of the presentation are ugentblue, black and white.
- The secondary color should only be used exceptionally.
- The theme defines a special color `ugent-alert`.
- This color is *or* ugentyellow *or* the faculty color.
- The special color `ugent-alert` equals the faculty color:
  - **if** the faculty specific template is used
  - **and if** the option `usecolors` is set
- In all other cases `ugent-alert` is ugentyellow

Example of ugent-alert

Theorem

There is no largest prime number.

Example of ugent-alert

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Proof

1. Suppose p were the largest prime number.

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EXAMPLE OF UGENT-ALERT

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1. Suppose p were the largest prime number.
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3. Then $q + 1$ is not divisible by any of them.

Example of ugent-alert

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1. Suppose p were the largest prime number.
2. Let q be the product of the first p numbers.
3. Then $q + 1$ is not divisible by any of them.
4. But $q + 1$ is greater than 1, thus divisible by some prime number not in the first p numbers.

Example of ugent-alert

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ANOTHER EXAMPLE OF UGENT-ALERT

Blocks can be created for definition, proofs, examples, etc.

Regular block

This is an important message.

ANOTHER EXAMPLE OF UGENT-ALERT

Blocks can be created for definition, proofs, examples, etc.

Regular block

This is an important message.

A special kind of block is the `alertblock`:

Alert!

This is a very important message.

FRAME NUMBERS

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Frame numbers

- By default frame numbers are places on every “regular” frame.
- That excludes logoframes, titleframes and sectionframes.
- The frame number is always followed by the total number of frames.
- The theme option `noframenumber` removes frame numbers on all slides.

QUESTIONS?

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FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

INTERNAL SEMINAR - 12/02/2020

TECHNICAL ANALYSIS IN BITCOIN MARKETS

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