Risk
in technology stock investment

- Winner? Consistent winning? 4+4+2?

- Derivative(衍生工具)/ Margin(孖展)/ Shortsell(拋空)*?

- Dead tech stocks?

Topics

- Tech stocks different?
  - Business
  - Share price

- Common mistakes

- Winning homework

Tech company characteristic 1

- Semicon(半導體)/ Hardware(硬件), software(軟件), internet(互聯網), solar(太陽能)….
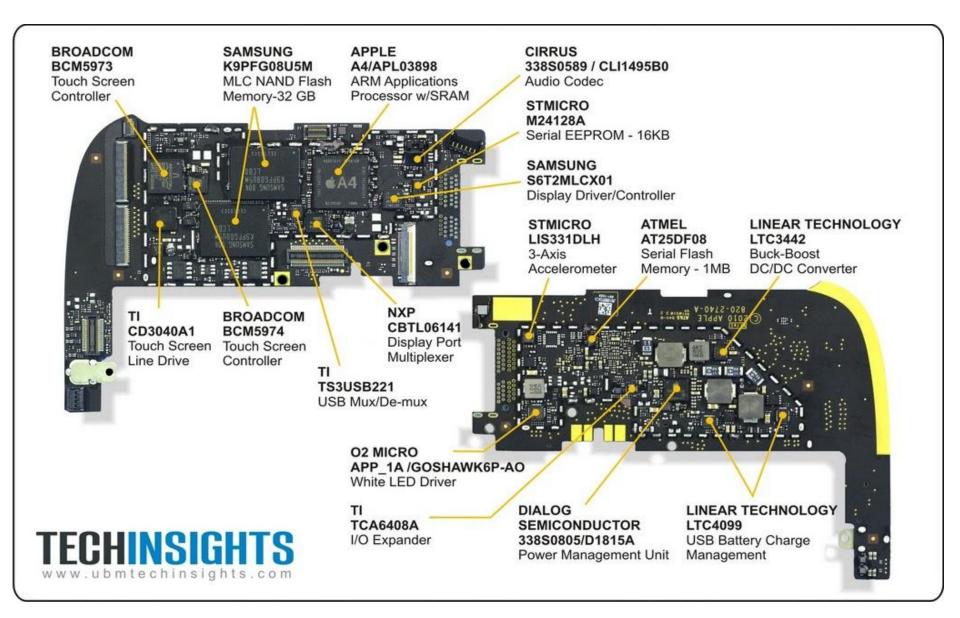
- Technology transition(技術轉型)very critical
  – Missing a wave implies missing a generation

- Product not easily observable
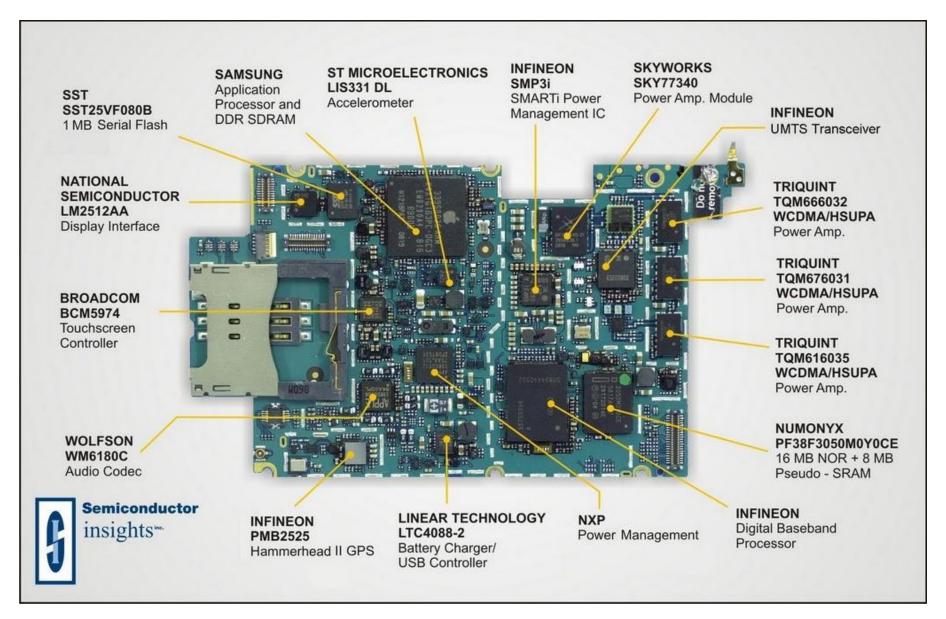 – Teardown(拆除)or tear down(拆解)
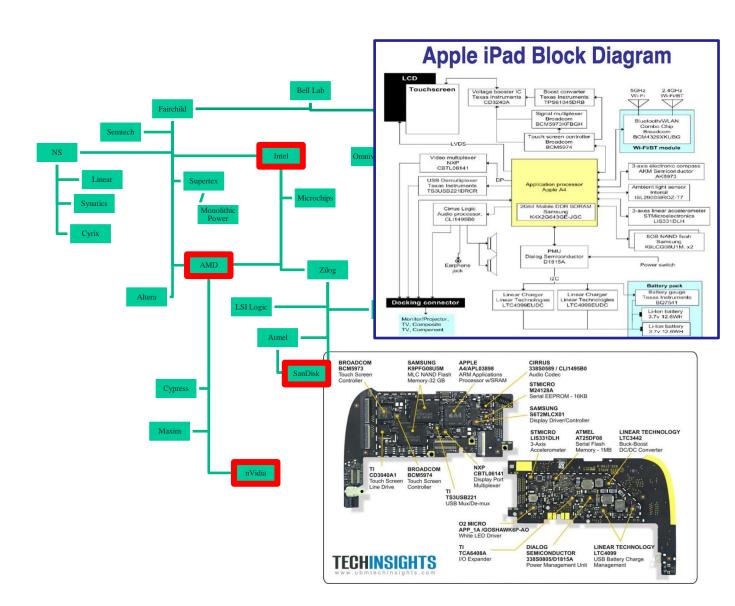
Teardown or Tear down
拆除或拆解

What is this?

BROADCOM BCM5973 Touch Screen Controller

SAMSUNG K9PFG08U5M MLC NAND Flash Memory-32 GB

APPLE A4/APL03898 ARM Applications Processor w/SRAM

CIRRUS 338S0589 / CLI1495B0 Audio Codec

STMICRO M24128A Serial EEPROM - 16KB

SAMSUNG S6T2MLCX01 Display Driver/Controller

STMICRO LIS331DLH 3-Axis Accelerometer

ATMEL AT25DF08 Serial Flash Memory - 1MB

LINEAR TECHNOLOGY LTC3442 Buck-Boost DC/DC Converter

TI CD3040A1 Touch Screen Line Drive

BROADCOM BCM5974 Touch Screen Controller

NXP CBTL06141 Display Port Multiplexer

TI TS3USB221 USB Mux/De-mux

O2 MICRO APP_1A /GOSHAWK6P-AO White LED Driver

TI TCA6408A I/O Expander

DIALOG SEMICONDUCTOR 338S0805/D1815A Power Management Unit

LINEAR TECHNOLOGY LTC4099 USB Battery Charge Management

TECHINSIGHTS
www.ubmtechinsights.com

What is this?

SST
SST25VF080B
1 MB Serial Flash

SAMSUNG
Application
Processor and
DDR SDRAM

ST MICROELECTRONICS
LIS331 DL
Accelerometer

INFINEON
SMP3i
SMARTi Power
Management IC

SKYWORKS
SKY77340
Power Amp. Module

INFINEON
UMTS Transceiver

NATIONAL
SEMICONDUCTOR
LM2512AA
Display Interface

TRIQUINT
TQM666032
WCDMA/HSUPA
Power Amp.

TRIQUINT
TQM676031
WCDMA/HSUPA
Power Amp.

BROADCOM
BCM5974
Touchscreen
Controller

TRIQUINT
TQM616035
WCDMA/HSUPA
Power Amp.

WOLFSON
WM6180C
Audio Codec

NUMONYX
PF38F3050M0Y0CE
16 MB NOR + 8 MB
Pseudo - SRAM

Semiconductor insights inc.

INFINEON
PMB2525
Hammerhead II GPS

LINEAR TECHNOLOGY
LTC4088-2
Battery Charger/
USB Controller

NXP
Power Management

INFINEON
Digital Baseband
Processor

Real homework

- Y-Y
- H-H
- Q-Q
- M-M

- 4Q-4Q

Tech company characteristics 2

- IP(知識產權)/ Patent(專利)understanding
  – Challenging to outsiders

- Business extremely scalable
  – Scale up(擴大規模)and scale down(縮減規模)fast

- Very long supply chain(供應鏈), many layers
  – Difficult to understand & many turning points…

Isaac Newton(牛頓)

1st Law: **Inertia➜ common sense**

惰性 ➜ 常識

2nd Law: **F=ma ➜ turning point**

力量=重量 X加速➜轉捩點

3rd Law: **Action & Reaction Force**

力量與反力量

Second derivative(二階導數)
- point of Inflection

S	➜	**Displacement**
dS/dt	➜	**Velocity**
d²S/dt²	➜	**Acceleration or Deceleration**

Tech company characteristics 3

- IPO due diligence(首次公開招股的盡職審查), auditors(核數師)
  - Even analysts may make serious mistakes

- Aggressive accounting
  - Revenue recognition, depreciation, R&D Capitalization, expenses definition keep changing

Tech company share price 1

- Highly volatile
  - Misunderstanding leads to panic selling/ buying

- 1 star company rise, 9 losers sink

- Less correlated with general market direction
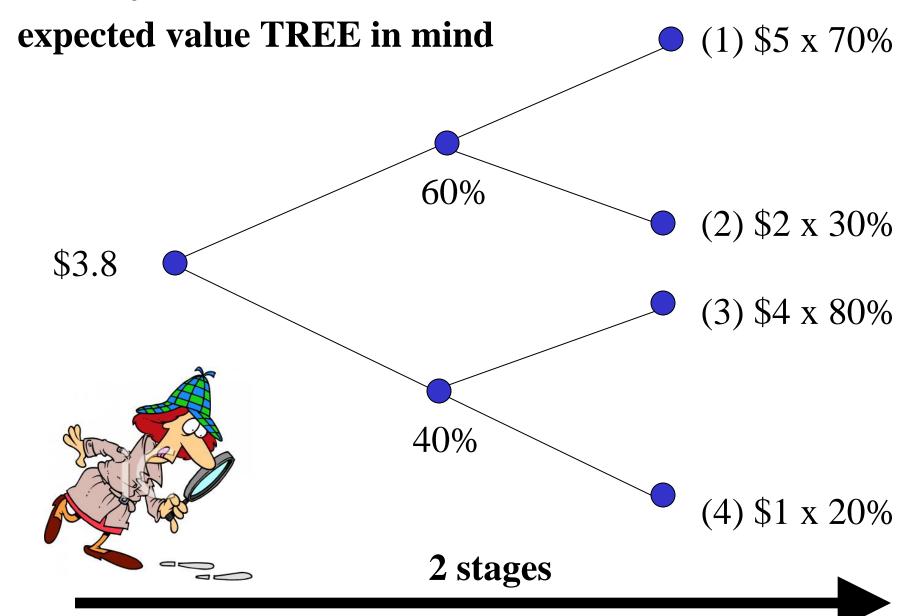 - Company specific issue dominating

Change from beta to alpha

Tech company share price 2

- Highly related to design-win, less affected by policy, more affected by innovation

- Valuation method extreme
  - High P/E for dream company
  - Low P/E for low growth company

- Skillful institutional investors active participation
  - Risky!!

risk-adjusted return(已調整風險回報)

expected value TREE in mind

$3.8

60%

40%

(1) $5 x 70%

(2) $2 x 30%

(3) $4 x 80%

(4) $1 x 20%

2 stages

Blue chip   vs Tech stocks

Common mistakes 1

- Defects in traditional valuation methods
  - DCF, historical P/E, forward P/E

- Price revert to mean
  - Range trading in the past

- Value trap
  - Low P/E, Low ex-cash P/E, Low P/B

Common mistakes 2

- Asset value, Capex, Inventory value
  - Legacy product, facility, machines…

- Too local view
  - Country view, not connecting to sector

- Overlook catalyst time table

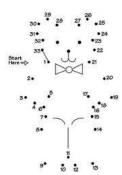# Homework besides Annual Report….

Exhibition

Shopping

Industry report

legal α

mosaic

illegal α

evil α

Transformation

Blame

Exposing in **β**

Study

Seeking α

Shortselling & Shortsqueezing
拋空與挾淡倉