Credit Suisse Global Investment Returns Yearbook 2017

- Credit Suisse is proud to publish the 2017 edition of the Global Investment Returns Yearbook.

- The Yearbook is produced in conjunction with Elroy Dimson, Paul Marsh and Mike Staunton, recognized as leading authorities on the analysis of the long-run performance and trends of stocks, bonds, Treasury bills (cash), inflation and currencies.

- The Yearbook provides an analysis of investment returns stretching back 117 years, spanning all five asset categories in 23 countries.

- As well as the typical long term perspective to current events it brings, this year’s edition provides fresh analysis of factor investing strategies. Are smart beta strategies…smart?

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From past to present: the evolution of equity markets

The continuing dominance of the USA is a striking feature

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
From past to present: the USA’s great transformation

Start-1900

80% by weight in industries → now small or non-existent
then small or non-existent ← 67% by weight in industries

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
From past to present: the UK’s great transformation

Disruptive technology has been familiar for two centuries
Investing in the “new” is not the obvious route to riches

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
The past: Real returns and dividends, 1900–2016

We should focus on real return. Real return is largely dividends.

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Long-run asset returns for all countries, 1900–2016

Prospectively, the world equity premium (versus bills) is 3–3½%
US equities were volatile with large real drawdowns

But bonds have also had large drawdowns in real terms

Diversification across asset classes helps to reduce risk

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
But long rates still low. So short rates likely to remain low

Real (after inflation) returns on long bonds still very low

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
The race to zero and beyond? Is it over?

Real yield for representative 10-year index-linked bond

No need to extrapolate past returns. Just look at current yields.
Real yields still negative or close to zero. Slight upturn recently.

Low real interest rates impact subsequent real equity and bond returns
Many investors are anticipating a return to “normal”

300 years of UK bond yields. What yield is “normal”?

The high bond returns since 1980 were not “normal”

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Many investors are anticipating a return to “normal”

What real rate of interest is “normal”?

Average annual % real interest rate (short-term interest rate minus inflation)

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Inflation on the rise? Equities, bonds and inflation

Equities best during low inflation. Bonds better in deflation. Higher inflation harms bonds – but it also harms equities.

Equities have been a poor inflation hedge

Sensitivity to concurrent inflation was $-0.52$

Don’t confuse inflation beating with inflation hedging

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
The future: What equity premium can we expect?

We estimate the long-run equity premium vs bills to be 3–3½%
The high return world we grew up in

Annualized real returns on equities and bonds (%)

Since 1950

US | Jap | UK | Can | Aus | Eur | Wld

Equities | Bonds

Since 1980

US | Jap | UK | Can | Aus | Eur | Wld

Equities | Bonds

Baby boomers

Generation X

Millennials? Past performance conditions our aspirations

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Looking forward from 2017

Annualized real returns on equities and bonds (%)

World since 1950
World since 1980
World
USA
Japan
UK
Europe
Emerging markets

Historical high returns
Prospective lower returns

Have expectations changed? We are still in a lower return world

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
The future

- Real interest rates are low, and bond yields are low
  - expected returns on all assets are lower than past returns
  - modest rises in inflation are unlikely to impact real returns

- Long-run equity premium (vs bills) is around 3–3½%
  - lower than the historical average
  - equities will stay volatile, but diversification lowers risk

- What to do about the low-return world?
  - the Yearbook provides a long-term perspective
  - the current ‘vogue’ is to seek returns from smart beta…
Investors ditching active management (USA, 2007–16)

Cumulative asset flow (USD bn)

Sources: Investment Company Institute, Simfund, Credit Suisse
Rapid growth of factor-based ETFs

Source: Financial Times, Morningstar Direct
Are investment institutions adopting smart beta?

- 75% now using or actively evaluating smart beta
- Among users, two-thirds considering further allocation
- 20% now use ≥ 5 smart beta indexes (vs 2% in 2014)
The smart-beta “zoo”

- Researchers have reported on 458 factors
  - few will work out-of-sample

- Fama-French identify five factors
  - market, size, value, profitability, investment
  - others stress low-risk, and momentum

- We study five factors
  - low-risk, momentum, size, value, income
  - over up to 117 years, and in up to 23 markets

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Low-risk investing

- Classic strategy (published 1972)
  - low beta portfolio gives superior risk-adjusted return
  - now labelled as BAB (Bet Against Beta)

- Recent approach uses idiosyncratic volatility
  - low-volatility portfolio gives superior return…
    … compared to high-volatility portfolio

- Many variants of these “low-vol” strategies
  - an approach that has become popular since the GFC

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Low risk factors in the USA, 1963–2016

Weakest effect: “Betting against beta”. Strongest: Specific risk

Source: Data from Professor Kenneth French, Dartmouth (website)
Specific risk factor in the USA

Premium arises from underperformance of the highest-risk quintile

Based on daily returns. Source: Data from Professor Kenneth French, Dartmouth (website)
Specific risk factor in the UK

- Lowest risk: 11.6% p.a.
- Medium risk: 10.3% p.a.
- Highest risk: 4.2% p.a.

Same methodology using daily data: UK results similar to USA

Longer-term (60-month) specific risk estimates in UK

Effect driven entirely by highest risk stocks during dot-com crash

**Momentum**

- Sort stocks by return over past 6 or 12 months
  - target the top and bottom quintile (say)

- Wait a month
  - then buy past winners (and short past losers)

- Rebalance periodically
  - typically after 6, 3 or 1 month(s)

- Measure premium: WML (“Winner Minus Loser”)

The momentum premium, 1900*–2016

United States†

United Kingdom‡

Large long-run, pre-cost returns; but volatile with high turnover

* from 1926 in the US † Based on a 6/1/6 momentum strategy ‡ Based on a 12/1/1 momentum strategy

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Momentum returns around the world

Unusually, the factor premium was larger after the original study

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Other factors: the size premium, 1926*–2015

The smallest firms have performed the best, but not consistently

* from 1955 in the UK

Sources: US CRSP capitalization deciles are from Morningstar; UK Small and Mid-caps are Numis indices.
A global phenomenon; large premium since 2000
Other factors: the value premium, 1926*–2016

United States

Value stocks have outperformed, but not always

* from 1955 in the UK

Value

Growth


United Kingdom

High book-to-market 16.0% p.a.  UK market 12.1% p.a.
Low book-to-market 10.3% p.a.

Source: US data from Professor Kenneth French, Dartmouth (website)
The value effect around the world

% per year (value minus growth)

Value beat growth in most countries over the long-run

Source: MSCI value and growth indexes
Other factors: the income premium, 1900*–2016

United States

United Kingdom

High yielders have beaten low yielders; a variant of the value effect

* from 1927 in the USA

Source: US data from Professor Kenneth French, Dartmouth (website)
The income premium around the world

Positive premia in most countries; large premia since 2000

Source: All data except UK data is from Professor Kenneth French, Dartmouth (website)
## Factor performance since the financial crisis

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Differences over time and across markets; scope to diversify

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
Smart beta

- Distinguish factors vs premiums
  - factor: an influence on security returns
  - premium: a superior expected return

- Premiums may be evident over the long run
  - some (size, value) may be harvested passively
  - some (low-vol, momentum) require portfolio churning

- Factor exposures can have a large performance impact
  - investors can unwittingly take large positions

- Factors can become too expensive
  - popularity can make them an over-crowded trade

Source: Elroy Dimson, Paul Marsh, and Mike Staunton, Triumph of the Optimists, Princeton University Press, 2002, and subsequent research
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