Institutional Investors

The history of professional fund management

eabh in cooperation with Schroders and Banque Lombard Odier

26 October 2018, London, UK

Schroders

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eabh

we do history

THE RISE OF INSTITUTIONAL INVESTORS

Dr Hugo Bänziger
26 Octobre 2018

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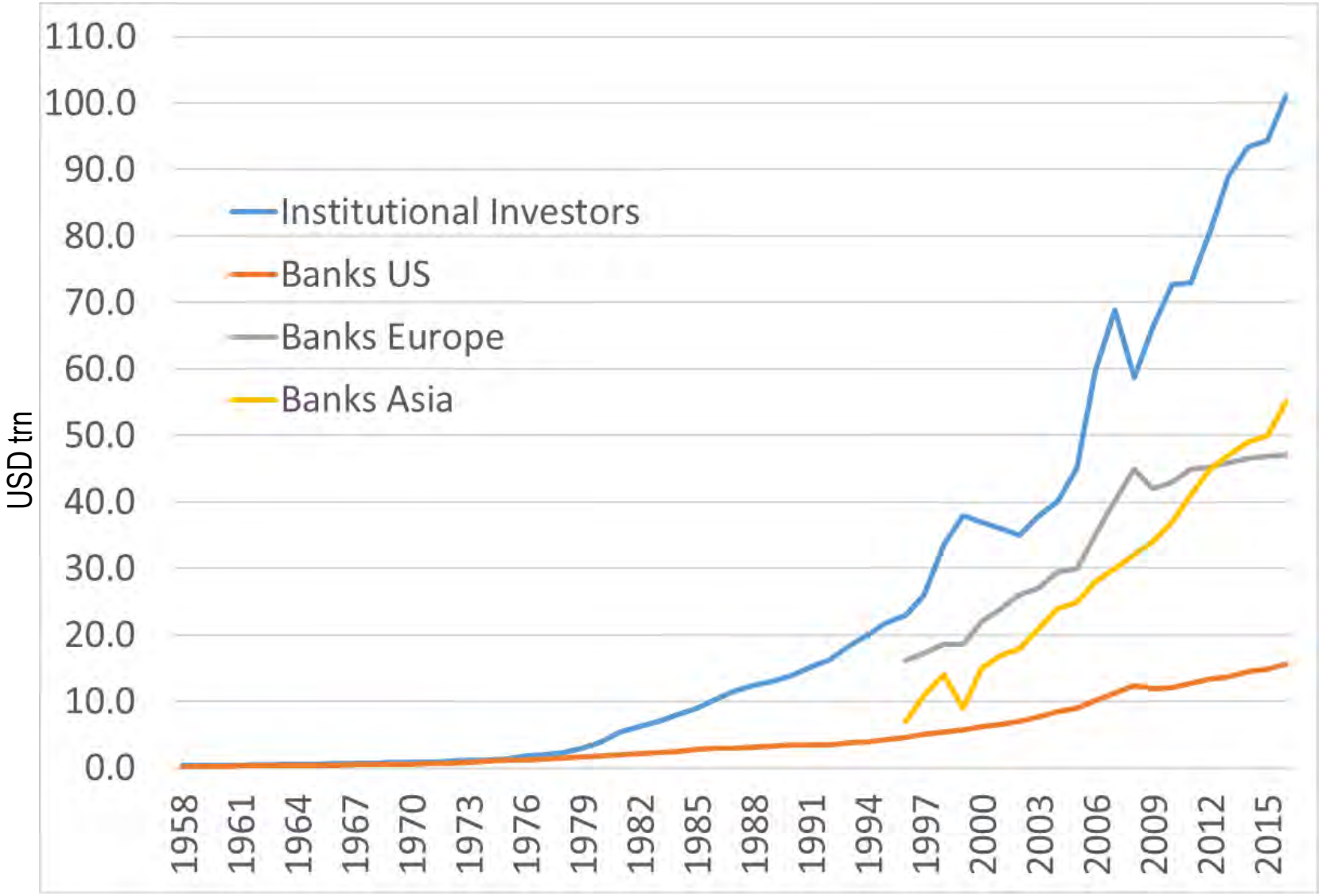
INSTITUTIONAL INVESTORS DOMINATE CAPITAL MARKETS



Source: CitiUK, OECD, IMF, Own calculations

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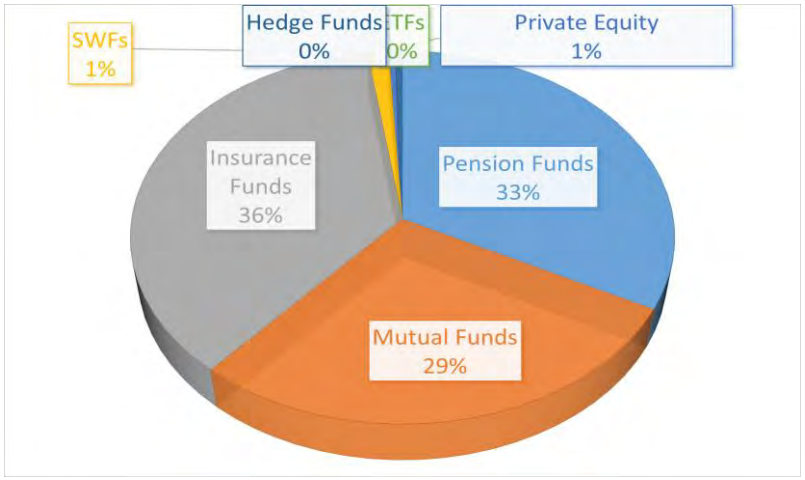
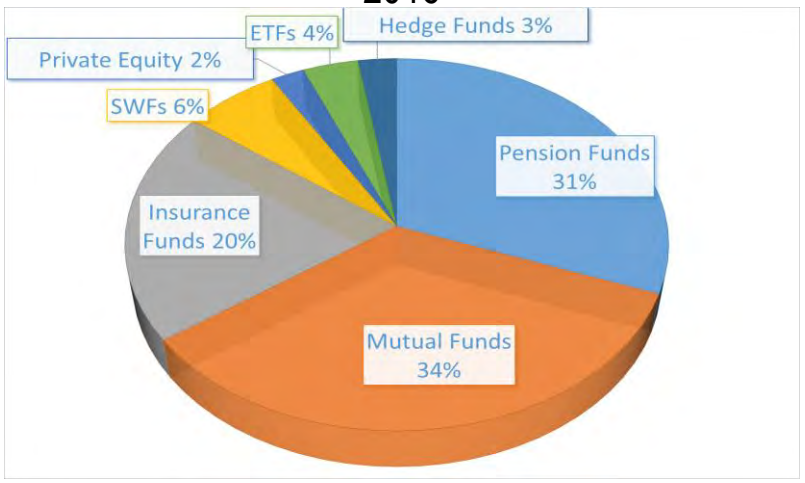
OUR SOCIAL SAFETY NETWORK

1996

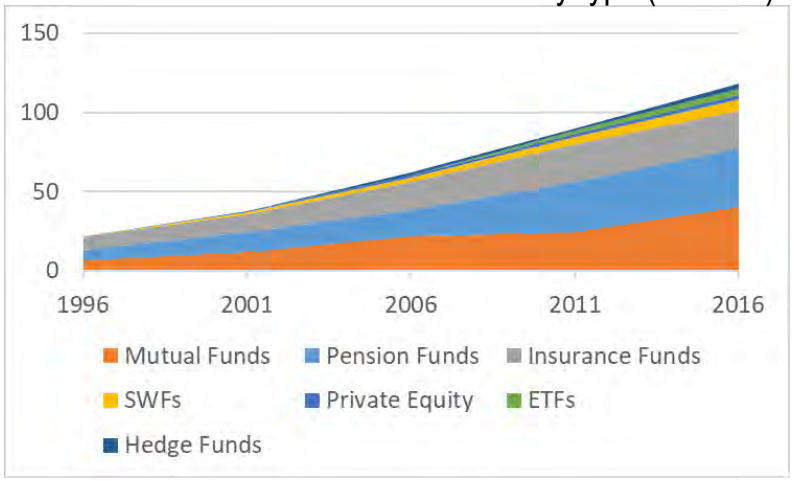


2016



Source: CitiUK, OECD, IMF, Own calculations

Evolution of institutional investors AuM by type (USD trn)



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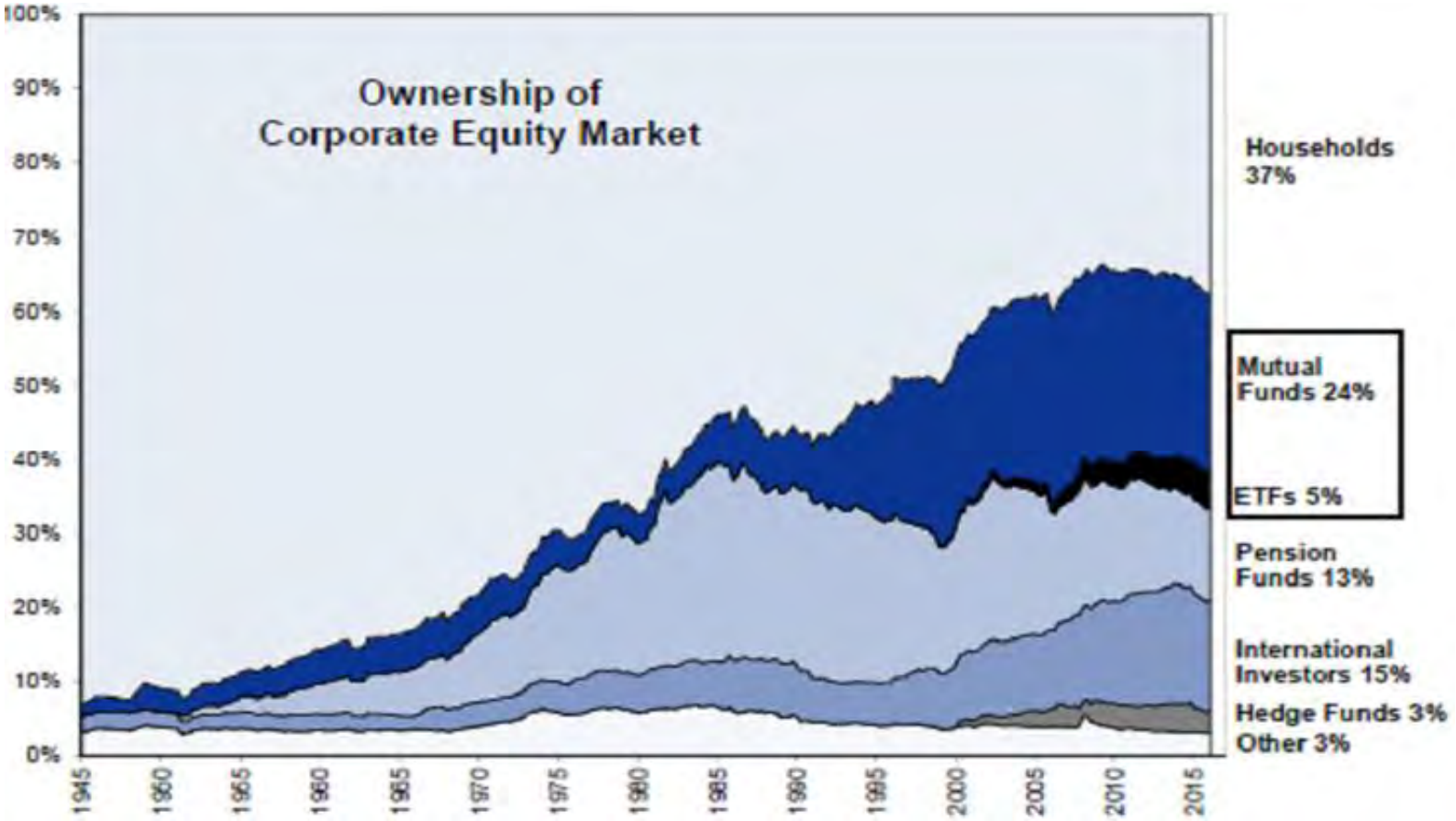
PRIVATE OWNERSHIP SHRINKS



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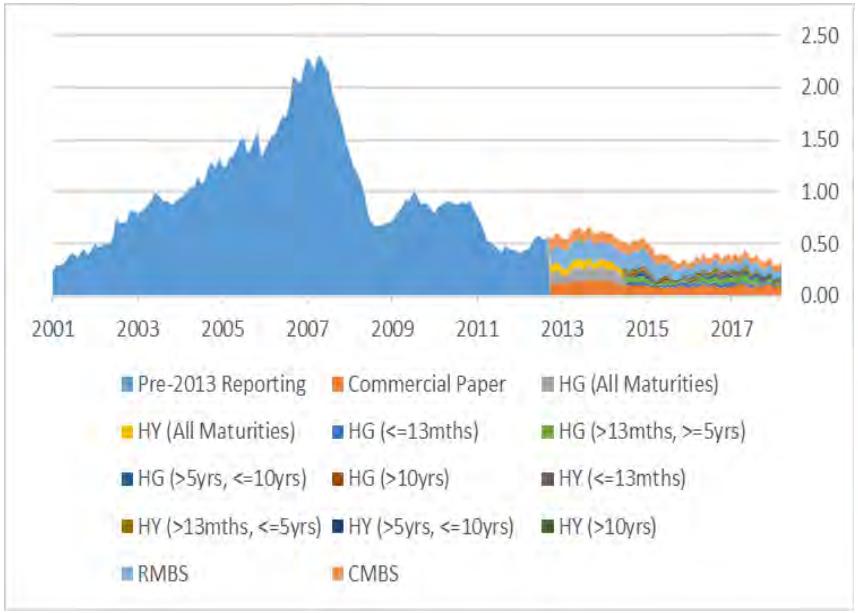
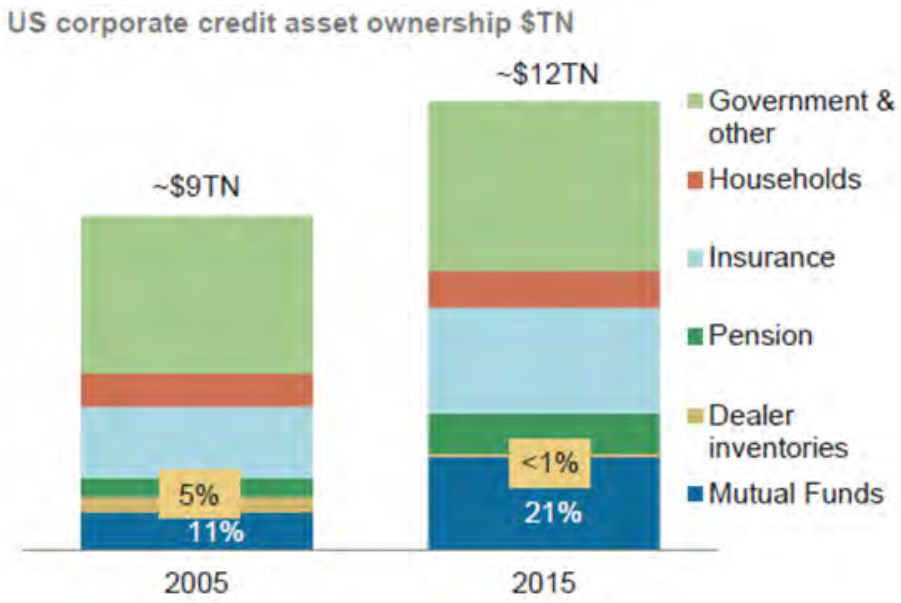
BANKS DELEVERAGE

Dealers inventory trading is at levels of 1998 ….



Ownership of credit assets shifted to Intitutional investors



Source: NY Fed, Bloomerg, FDIC

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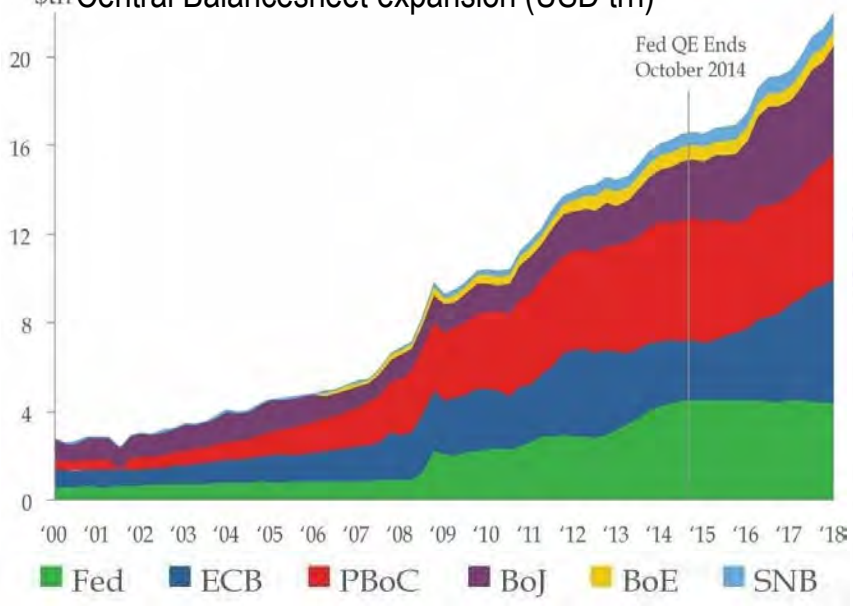
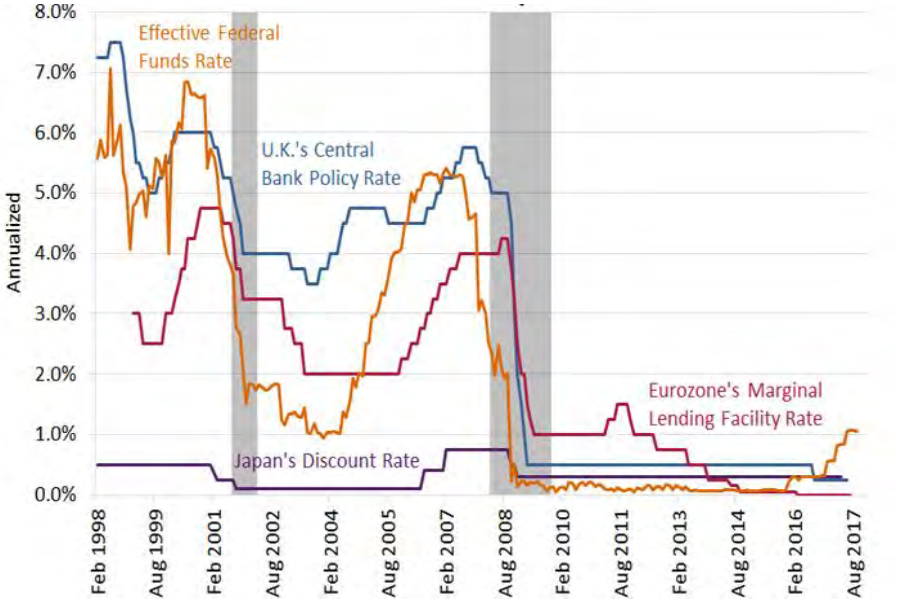
RATES ARE AT RECORD LOW LEVELS

Central Balancesheet expansion (USD trn)



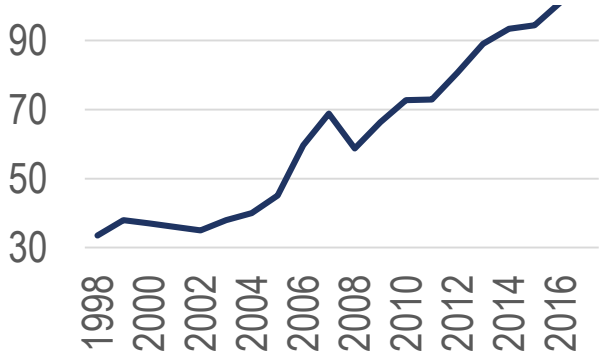
Source: NY Fed, Bloomerg, FDIC

Oficial interest rate drops



Source: NY Fed, Bloomerg, FDIC

Institutional Investors AuM (trn USD)



Source: CitiUK, OECD, IMF, Own calculations

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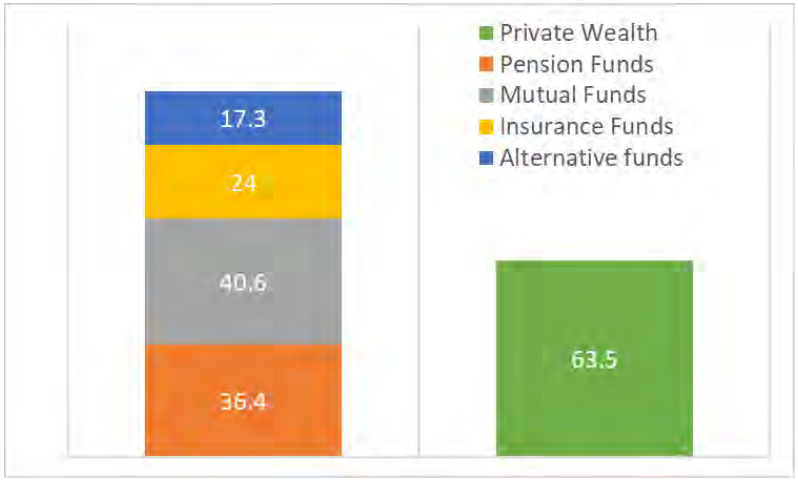
INSTITUTIONAL INVESTORS

INVESTMENT MANAGEMENT BECOMES AN INDUSTRY

- Up to the I World War, stocks were owned by wealthy private individuals.
- 100 years later, institutional investors hold twice as many assets than private individuals.
- This development is a result of economic growth, the emergence of a middle class and the aging of society
- After the World War I, pension plans become common. They are society's answer to longer life expectancy and the large number of never married women
- Insurance companies are a consequence of citizens accumulating wealth which they want to insure
- The driving force are now Mutual funds. As early as 1925, middle class investors started pooling their savings.
- Sovereign Wealth Funds are the latest type of institutional investors.

End 2016 AuM (USD Trn)



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INSTITUTIONAL INVESTORS

PENSION PLANS TAKE OFF

- Pension plans date back to the 19th century. American Express is the first company to establish a pension plan in 1875
- The idea catches on slowly. By 1899, there are 19 private pension plans in America, by 1919 around 300 (15% workforce)
- Great Brittain & Germany take another route. Bismarck creates an old-age & health insurance in 1889. GB follows in 1908. Both schemes are pay-as-you-go systems. Ret. age is 70
- The war experience is a great catalyst. Pension plans become common. The US Revenue Act of 1921 resolves that pension income is to be taxed at the time of distribution.
- In 1935, the US Social Security Act establishes 65 as ret. age
- In 1946, Great Britain reforms its old-age insurance, making it available to all citizens & combing it with social security
- In 1947, Switzerland establishes a similar Old-Age Insurance scheme also financed as pay-as-you-go. Private pension plans continue as complementary instruments
- By 1970, pension plans cover 45% of the US workforce (26.3m)
- 1974 Employee Retirement Income Security Act (ERISA)

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INSTITUTIONAL INVESTORS

INSURANCE COMPANIES AS FIRST INSTITUTIONAL INVESTORS

- Insurance companies go back to the 18th century when they insure maritime shipping and homes against fire
- Only affluent individuals and corporations can afford insurance
- This starts to change in Europe and the US with the emergence of a larger middle class who is looking for property, casualty and life insurance. People start to have something to lose!
- Many new life insurance companies are established in the 2nd half of the 19th century and are part of the financial innovations which gave us the Credit Mobilier banks
- Frequently, private bankers are the founding fathers of life insurance companies
- Thus, the know-how about funds management transfers easily from the world of banking to the world of insurance
- Insurance companies always need cash for unpredictable pay-outs. As this cash is invested, it becomes an investment portfolio


Alexandria
No
District
10.
THIS Policy of Assurance, Witnesseth, that Mr Charles
Simms of Alexandria
NOW Know all Men by these Presents, That the said Mutual As-

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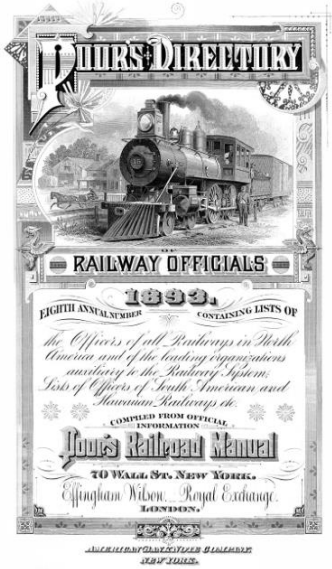
THE PROFESSIONAL POOLING OF SMALL INVESTMENTS

- The modern mutual fund industry starts with the Massachusetts Investor Trust, established in 1924, to save broker fees and to provide small investors with a diversified basket of shares
- By 1925, the US stock market is still fragmented. Tracking performance is a challenge given the lack of disclosure standards
- Moody's and Standard & Poors provide limited analysis
- By 1929, there are around 700 closed-end and 19 open-end mutual funds with USD 29bn of assets
- The crash of 1929 wipes out most mutual funds. By 1951, there are only 100 mutual funds left
- The Securities Exchange Act of 1934 establishes standard disclosure rules and creates transparency in the mutual fund offering
- In 1971, AuM reach USD 48bn. Over 85% are invested in shares
- In the mid 1950s, mutual funds reach Europe, where they were called Fonds or Investment Fonds
- Europe's post-war reconstruction is mostly financed by banks. Lack of investment opportunities



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INSTITUTIONAL INVESTORS
SOVEREIGN WEALTH FUNDS

- In 1953,the Kuwait Investment Authority (KIA) was established as the first Sovereign Wealth Fund (SWF).
- After 1973, 10 oil exporting countries establish their own SWF to manage their oil and gas incompe for future generations.
- Today more than half of SWF AuM are linked to oil and gas revenues.
- In 1981 Singapore goverment established GIC to manage Singapore's foreign reserves.
- In 1990 Norway established the Government Pension Fund of Norway, nowadays the biggest SWF.
- In 2007 China stablish its SWF (CIC) with AuM of 1 trn USD. It is the third world biggest SWF with almost the same siue as Abu Dhabi SWF created in the 70s.

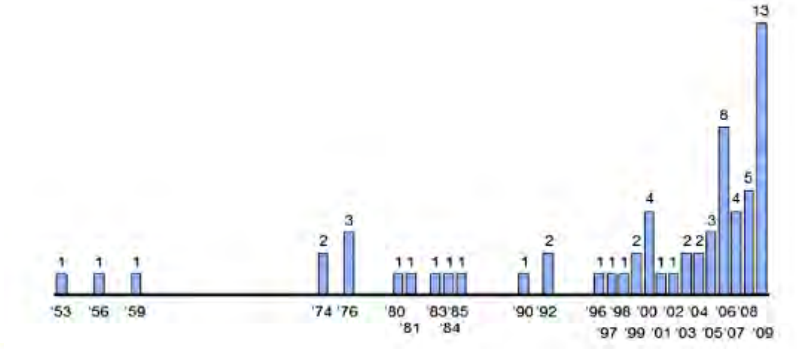
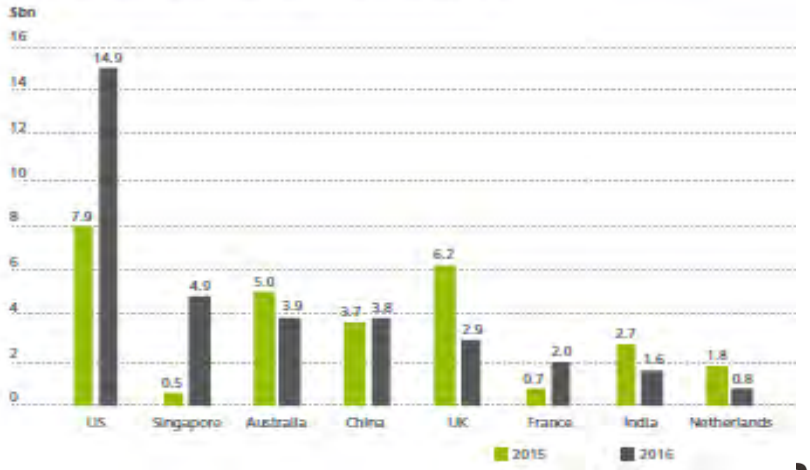


Figure 22: Target country of global Sovereign Wealth Fund investments

Source: International Forum of Sovereign Wealth Funds Annual Report 2016



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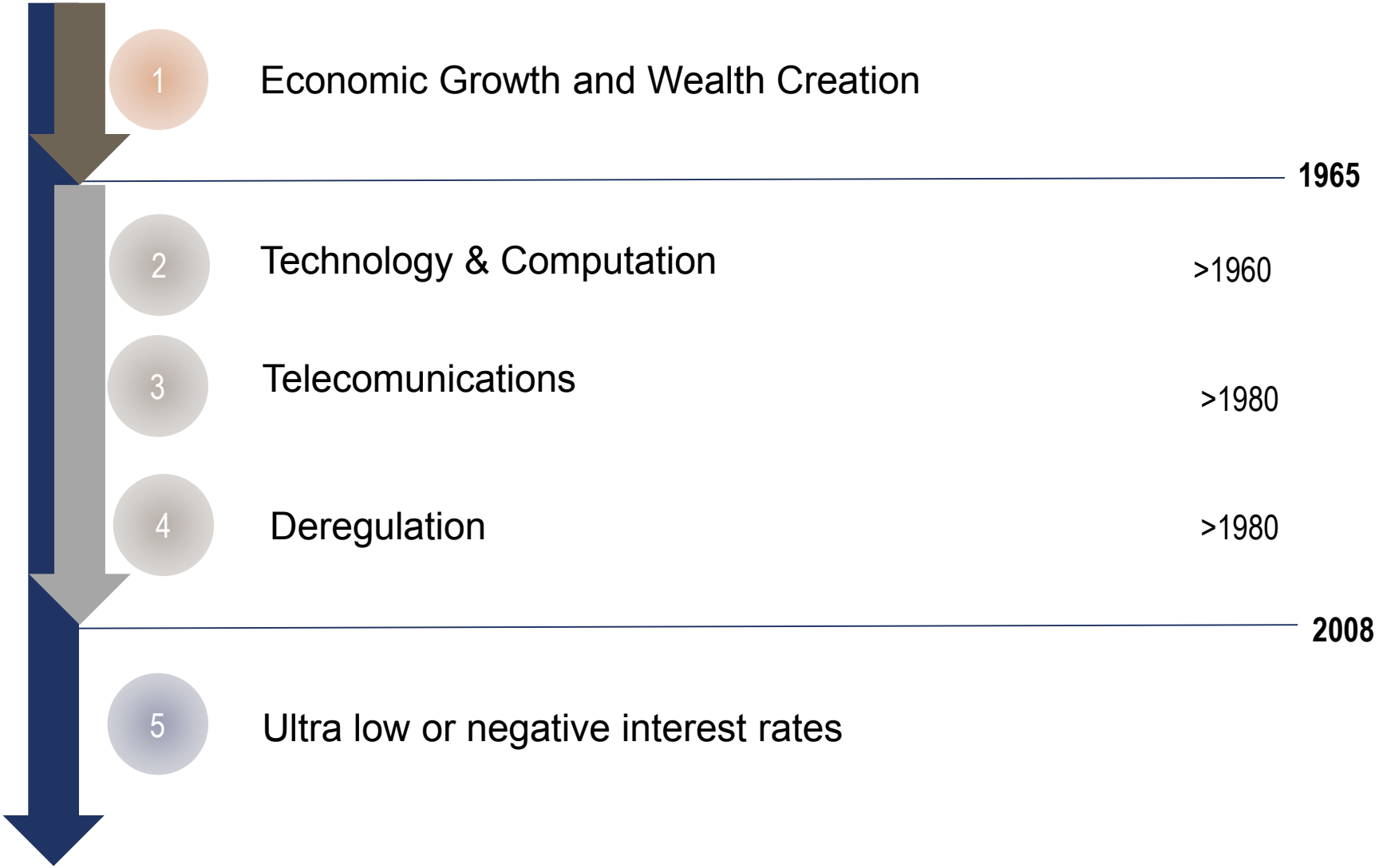
WHAT EXPLAIN THE STORY OF SUCCESS AFTER THE WORLD WAR



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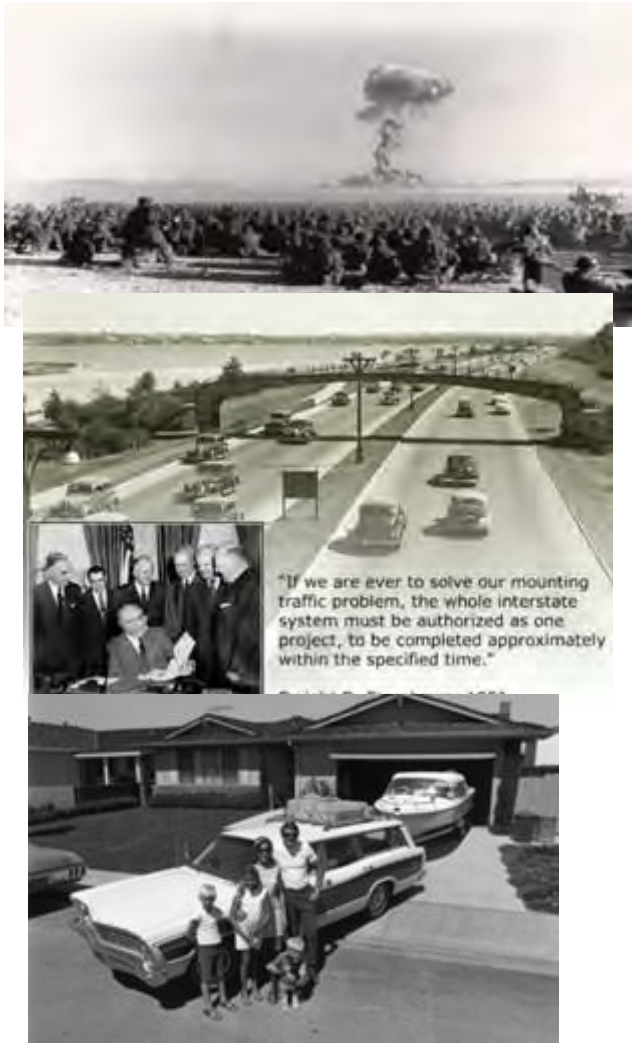
ECONOMIC GROWTH AND WEALTH CREATION: USA

POST-WAR ECONOMICS

- The United States demobilised its Armed Forces quickly. America relied on its nuclear force as a strategic deterrent
- The US export industry boomed, trade balance was strongly positive. It became the world's supplier of goods and allowed it to expand its industry fast. Unemployment dropped to rock bottom. The trade balance was highly positive.
- It also benefits from having its own oil which provides abundant and cheap energy
- Infrastructures was modernized: Large suburbs were constructed. Eisenhower resolved to build the famous Interstate Highway System in 1956
- A large US Middle class emerged: Every white family could afford a house, a car, holidays and college education for their children. It was goldilocks time for US citizens. They had savings to invest, goods to insure and time to think about their retirement.
- At that time US became the standard setter with US GAAP and US dollar became reserve currency
- Still today US based institutional investors AuM weigh more than 40% of World assets



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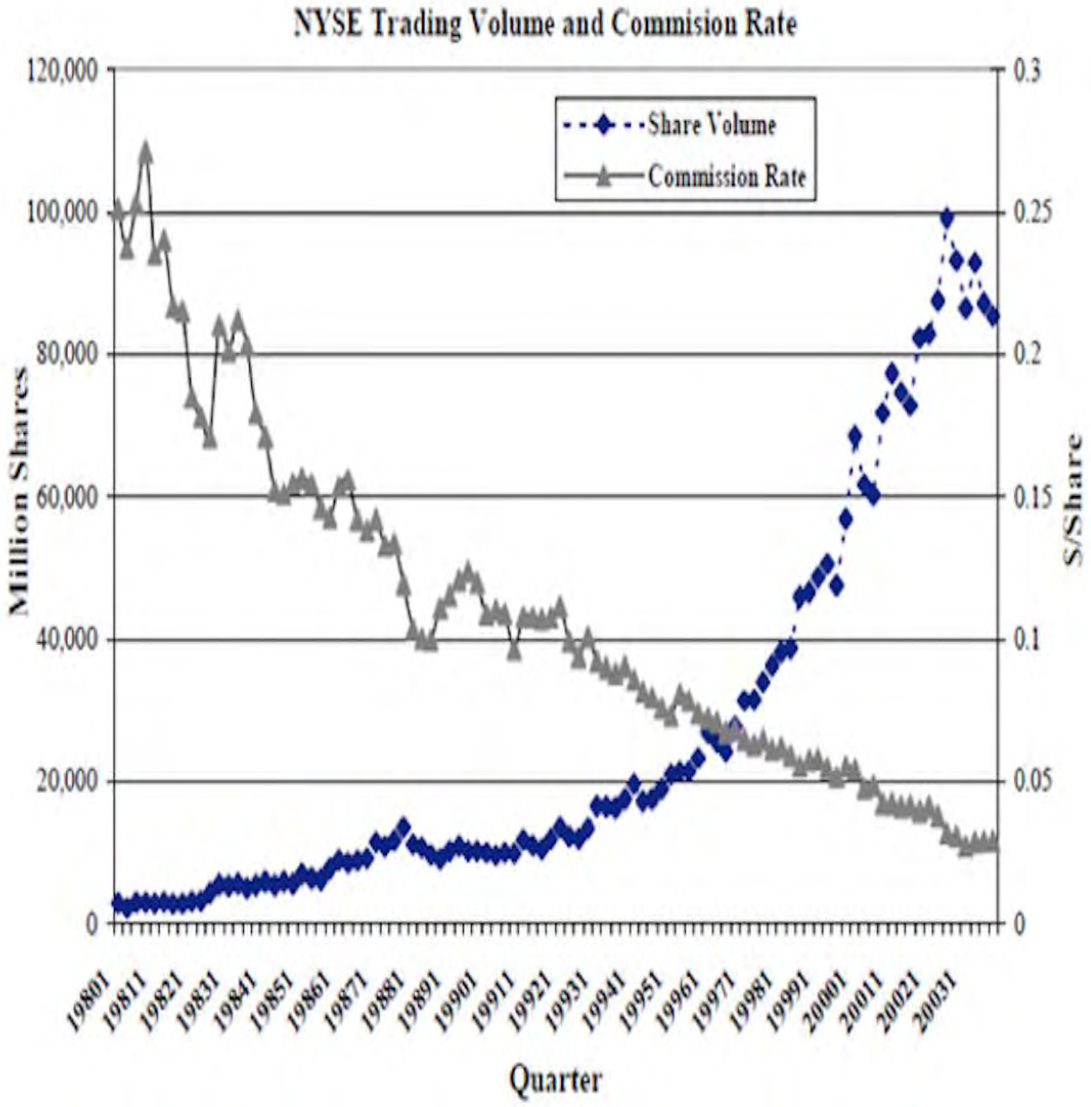
TECHNOLOGY & COMPUTATION

TRADING BECOMES POSSIBLE

- Technology is the biggest game changer in the financial industry
- As early as in 1962, broker dealers migrate the processing of trading orders to IBM in New York
- The arrival of desk top computers allows to automate the entire back-office chain by 1973
- As a consequence, brokerage fees start to drop. In the early 1980, fees for a share transaction amounted to 0.25% Twenty years later, it is 0.01%
- This progress in technology makes risk management possible
- Finally, portfolios can be rebalanced without running exorbitant cost



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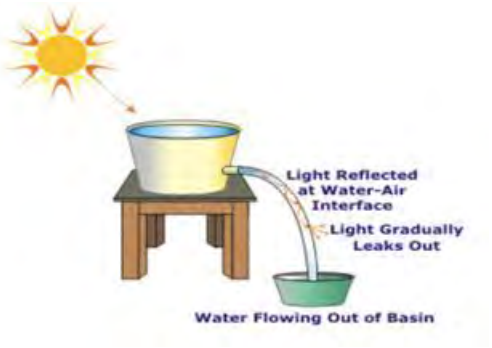
TELECOMUNICATIONS

THE DIGITAL LINKS AROUND THE GLOBE

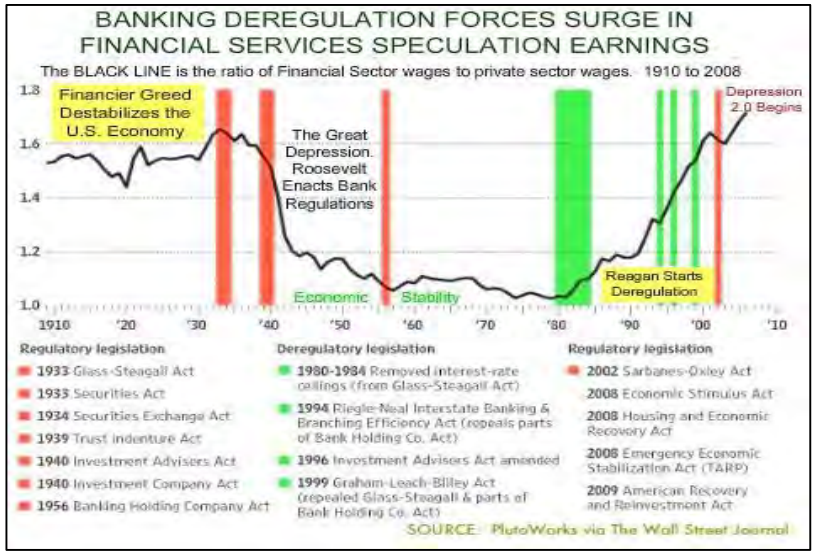
- Fibre optics are a relatively old technology - in 1880, Graham Bell makes calls with his “photophone” over a distance of 200m
- During the 1950s, the first image-transmitting device is created. However, the loss of light is excessive & restricts practical use
- The solution comes with cladding, the coating of fibre glass and the use of semi-conductor lasers in 1962. By 1970, researchers have minimised the light loss to 20dB/km & make it a viable technology
- The US Navy starts using fiberoptics in the early 1970s
- In 1977, the technology becomes commercial when GTE and AT&T install the first optical telephone systems in Boston and Chicago
- In 1980, the Winter Olympics from Lake Placid transmit via fiberoptics
- In 1988, the first trans-Atlantic optic cable is laid
- By 1996, the first trans-Pacific optic cable follows
- By 2007, fibre optic cables carry 99% of communication around the globe with satellites accounting for the remaining 1%
- A modern optical cable easily transmits 100Gb/s

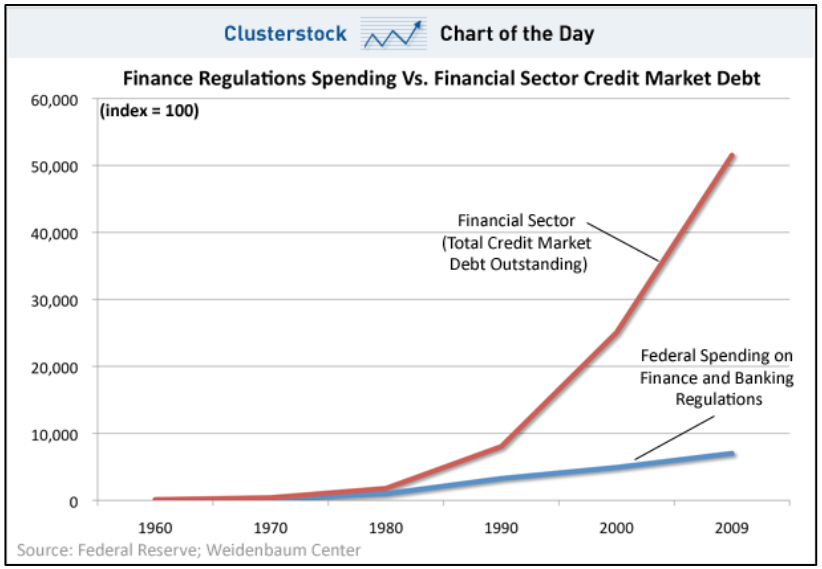


DEREGULATION

THE END OF THE STRAIGHT JACKET

- 1958 / 1964 Abolishment of capital and currency controls in both EEC and Japan
- 1971 Mutual Funds offer Money Market Accounts
- 1973 Free floating of all major currencies
- 1980 Removal of regulation Q – restrictions on deposit interest rates & l of business restrictions for Savings & Loan Associations
- 1984 Removal of barriers to interstate banking
- 1986 'Big Bang' in City of London
- 1988 Basel Accord on capital; 1995 on market risk
- 1992 Maastrich Treaty: 4 Liberties (Goods, Capital, Labour, Services)
- 1999 Graham-Leach-Billey Act removes Glass-Steagall separation
- 2006 EU Directive on Services in Internal Markets
- The world enters the Great Financial Crisis with a «light touch » regulatory framework





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WHAT DOES THIS RISE OF INSTITUTIONAL INVESTORS MEAN?

- Capital market structure?
- Policy implications?
- Impact on citizens?

Pension Policy and the Financial System

DAVID S. SCHARFSTEIN*

May 2018

ABSTRACT

This paper examines the effect of pension policy on the structure of financial systems around the world. In particular, I explore the hypothesis that policies that promote pension savings also promote the development of capital markets. I present a model that endogenizes the extent to which savings are intermediated through banks or capital markets, and derive implications for corporate finance, household finance, banking, and the size of the financial sector. I then present a number of facts that are broadly consistent with the theory and examine a variety of alternative explanations of my findings.

*Harvard Business School and NBER. Presidential Address delivered to the American Finance Association, Philadelphia, January 6, 2018. I am very grateful to Will Diamond, Robin Greenwood, Sam Hanson, Gianluca Rinaldi, Jeremy Stein, and Adi Sunderam for many valuable discussions and for helpful comments on drafts of the paper. I also benefited from discussions with Hugo Bänziger, John Beshears, John Campbell, Garrett Curran, Sarah Feldman, Andrea Hamaui, Victoria Ivashina, Anil Kashyap, Divya Kirti, David Moss, Thomas Philippon, Jim Poterba, Tarun Ramadorai, Andrei Shleifer, Paul Tucker, Boris Vallée, Luis Viceira, the passengers of Carpe Diem V, and seminar participants at Yale Law School and the Chicago Booth Initiative on Global Markets. I thank Andi Wang for providing extraordinary research assistance throughout the project. I am also grateful to James Palano and Francesca Guiso for the help at various stages of the research. The Division of Research at Harvard Business School provided generous funding for this work. Disclosure: I am a director of M&T Bank Corporation, which offers banking, asset management and retirement products and services.

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A Retirement Wealth Gap Adds a New Indignity to Old Age

Many middle-class Americans are financially unprepared for retirement—and that is leading to an array of social tensions

UNPREPARED

By Jennifer Levitz / Photographs by Rachel Bujalski for The Wall Street Journal

SANTA ROSA, Calif.—On a Saturday morning in retirement paradise, Ken Heyman stepped out to his front porch and found a brown paper bag. Inside was the chopped-off head of a rat.

Mr. Heyman was acting president of the homeowners' association at Oakmont Village, an enclave in Northern California's wine country for people age 55 and over. For months, the community had battled over the unlikeliest of topics: pickleball, a game that is a mix of tennis, badminton and ping pong. Some residents wanted to build a pickleball court complex that would cost at least $300,000. Others didn't, saying they didn't want to see their dues go up.

Residents shouted at each other at town-hall gatherings. One confrontation got so heated that a resident called the police. The governing board appointed a security guard to keep order at meetings.

For many, of course, the issue wasn't really about pickleball. It was about a divide that had opened between wealthier residents who moved to the village more recently and the less well-off, who said clubhouse updates, new fees and expensive amenities would be budget-busters.

Mr. Heyman's predecessor as president was a leader of the anti-pickleball faction. She felt she had been chased out of office by pickleball partisans. On the paper bag was a note.

"You're next," it read, according to a police report.

Around 10,000 baby boomers are turning 65 every day, and the same number will continue doing so for years. Some are on solid financial ground after a lifetime of planning and the fortune of well-timed home purchases and stock

Schroders

A brief history of Schroders and investment management

Caroline Shaw, Historical Archivist

October 2018

For professional investors or advisers only

From Hamburg merchants to London merchant bankers

The *Franziska* of the Brazilian route

Financing international development

The first railway in Japan, 1870

A steam train at Yokohama by Utagawa Hiroshige III, 1874

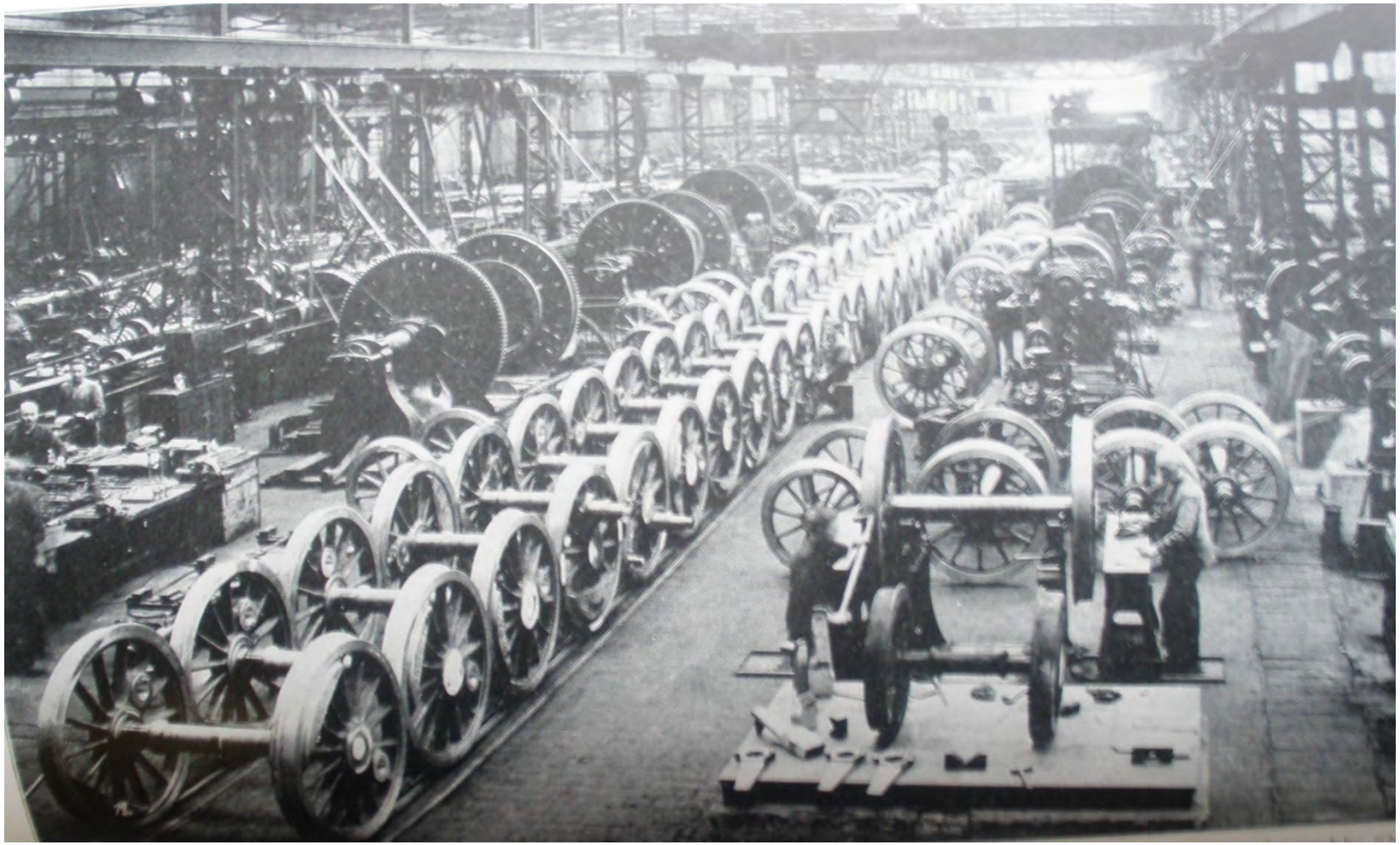
Private clients

Anglo-German ties

Princess Christian of Schleswig Holstein (1846-1923), daughter of Queen Victoria

Investing in industry

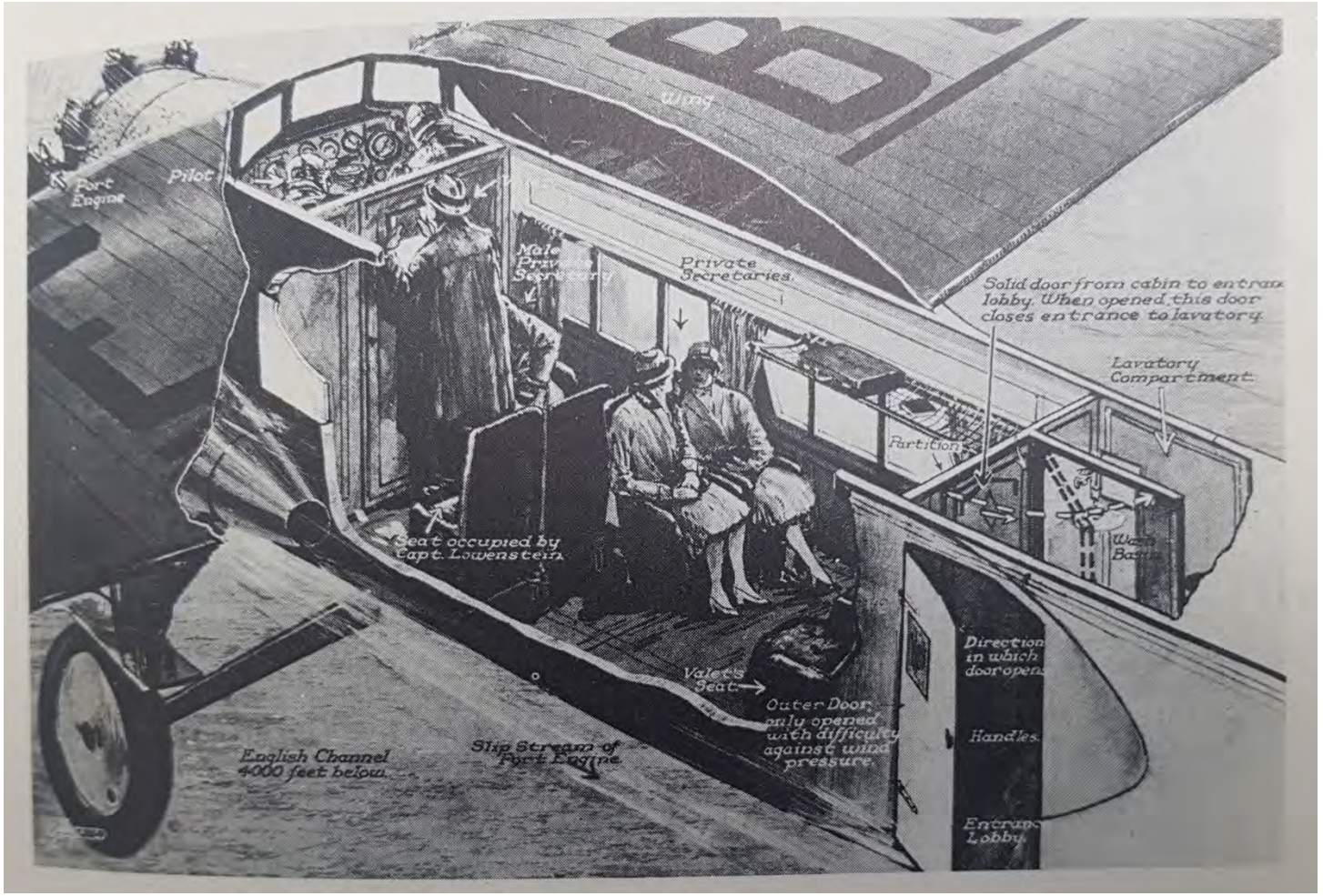
Continental and Industrial Trust, 1924



Deutsch-Luxemburgische Bergwerks- und Hütten-AG, Dortmund wheel and axle assembly shop, December 1925

Fund management by accident

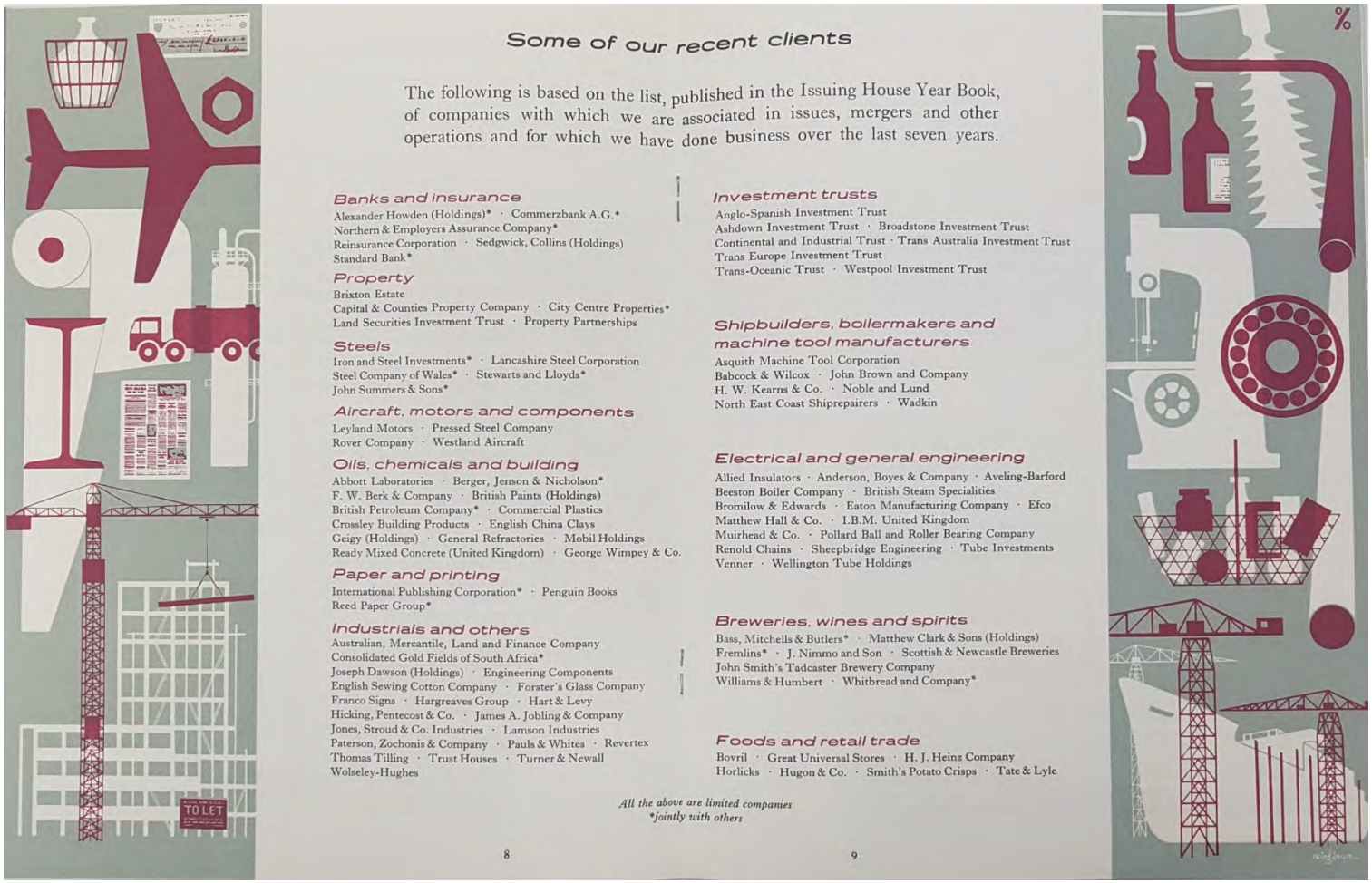
International Holdings and Hydro-Electric Securities



Artist's impression of Loewenstein's aircraft, depicted just after he fell to his death, July 1928. *Illustrated London News* and *The Man who Fell from the Sky* (William Norris, 1987)

J. Henry Schroder Wagg

Corporate finance clients



Some of our recent clients

The following is based on the list, published in the Issuing House Year Book, of companies with which we are associated in issues, mergers and other operations and for which we have done business over the last seven years.

Banks and insurance
Alexander Howden (Holdings)* · Commerzbank A.G.*
Northern & Employers Assurance Company*
Reinsurance Corporation · Sedgwick, Collins (Holdings)
Standard Bank*

Property
Brixton Estate
Capital & Counties Property Company · City Centre Properties*
Land Securities Investment Trust · Property Partnerships

Steels
Iron and Steel Investments* · Lancashire Steel Corporation
Steel Company of Wales* · Stewarts and Lloyds*
John Summers & Sons*

Aircraft, motors and components
Leyland Motors · Pressed Steel Company
Rover Company · Westland Aircraft

Oils, chemicals and building
Abbott Laboratories · Berger, Jenson & Nicholson*
F. W. Berk & Company · British Paints (Holdings)
British Petroleum Company* · Commercial Plastics
Crossley Building Products · English China Clays
Geigy (Holdings) · General Refractories · Mobil Holdings
Ready Mixed Concrete (United Kingdom) · George Wimpey & Co.

Paper and printing
International Publishing Corporation* · Penguin Books
Reed Paper Group*

Industrials and others
Australian, Mercantile, Land and Finance Company
Consolidated Gold Fields of South Africa*
Joseph Dawson (Holdings) · Engineering Components
English Sewing Cotton Company · Forster's Glass Company
Franco Signs · Hargreaves Group · Hart & Levy
Hicking, Pentecost & Co. · James A. Jobling & Company
Jones, Stroud & Co. Industries · Lamson Industries
Paterson, Zochonis & Company · Pauls & Whites · Revertex
Thomas Tilling · Trust Houses · Turner & Newall
Wolseley-Hughes

Investment trusts
Anglo-Spanish Investment Trust
Ashdown Investment Trust · Broadstone Investment Trust
Continental and Industrial Trust · Trans Australia Investment Trust
Trans Europe Investment Trust
Trans-Oceanic Trust · Westpool Investment Trust

Shipbuilders, boilermakers and machine tool manufacturers
Asquith Machine Tool Corporation
Babcock & Wilcox · John Brown and Company
H. W. Kearns & Co. · Noble and Lund
North East Coast Shiprepairers · Wadkin

Electrical and general engineering
Allied Insulators · Anderson, Boyes & Company · Aveling-Barford
Beeston Boiler Company · British Steam Specialities
Bromilow & Edwards · Eaton Manufacturing Company · Efco
Matthew Hall & Co. · I.B.M. United Kingdom
Muirhead & Co. · Pollard Ball and Roller Bearing Company
Renold Chains · Sheepbridge Engineering · Tube Investments
Venner · Wellington Tube Holdings

Breweries, wines and spirits
Bass, Mitchells & Butlers* · Matthew Clark & Sons (Holdings)
Fremlins* · J. Nimmo and Son · Scottish & Newcastle Breweries
John Smith's Tadcaster Brewery Company
Williams & Humbert · Whitbread and Company*

Foods and retail trade
Bovril · Great Universal Stores · H. J. Heinz Company
Horlicks · Hugon & Co. · Smith's Potato Crisps · Tate & Lyle

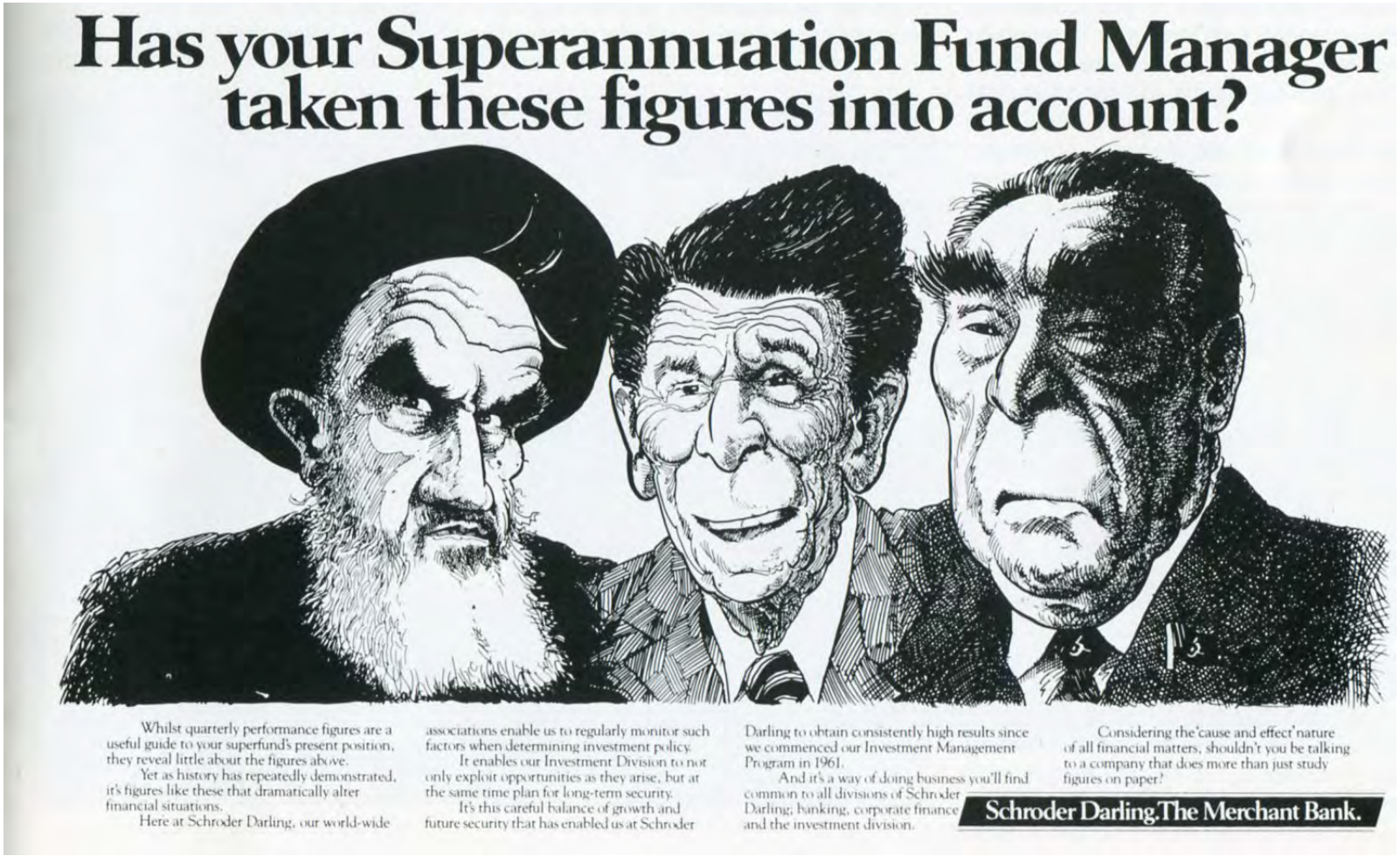
All the above are limited companies
**jointly with others*

8 9

Brochure *J. Henry Schroder Wagg & Co. Limited: Merchant Bankers*, 1965

Fund management

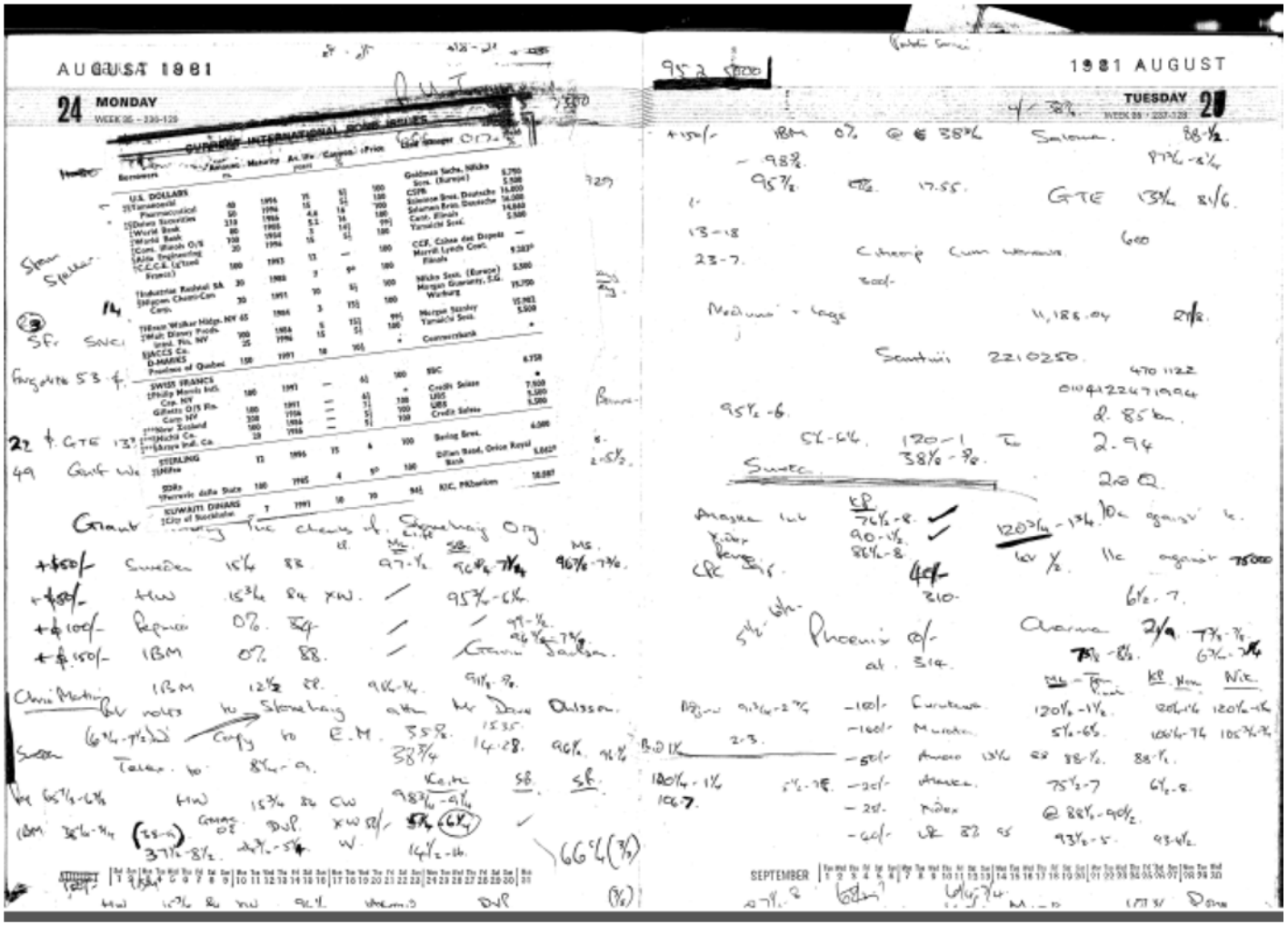
Internationalization



Advertising in Australia, 1982

Fund management

An evolving business



Fund manager's diary, 1981

Schroders

Asset managers

Sale of investment bank to Citigroup, 2000

Sale of investment bank will see expansion of asset management

Salomon to pay £1.4bn for Schroders division

BY CAROLINE MERRELL, BANKING CORRESPONDENT

SCHRODERS is selling its investment banking division to America's Salomon Smith Barney for £1.35 billion. The deal, which ends months of speculation about the future of Schroders, lifted its shares 11.4 per cent to £13.14.

Under the terms of the sale to Salomon Smith Barney, a equity business. The restructuring is expected to incur a one-off charge of less than £100 million.

The main beneficiaries will be trusts controlled by the Schroder family, headed by Bruno Schroder. The trusts, which hold 48 per cent of the shares, will receive a £432 mil-

Michael Carpenter, left, Salomon Smith Barney chairman, with his Schroders counterpart, Sir Win Bischoff, after announcing the £1.35 billion deal

Family firm

Schroder family, 1938

Schroders and the 21st century

Timeline

Innovation and strategic development

2000: sale of the investment bank to Citigroup

2001: our first responsible investment policy is published

2004: celebration of our 200th anniversary

2005: start of joint venture with Bank of Communications in China

2006: our first diversified growth strategy is launched

2007: liability driven investment solutions are developed

2009: launch of GAIA platform for hedge fund investment

2011: opening of an office in Chile, the 27th country where we have a presence

2012: entered into partnership with Axis Asset Management in India

2013: acquisition of Cazenove Capital Holdings

2014: stake taken in Nutmeg, a UK online investment manager

2015: launch of our online behavioural finance tool, incomeIQ

2016: start of strategic relationship with Hartford Funds, a US asset manager

2017: acquisition of C. Hoare 's wealth manager and Adveq private equity solutions

EARLY INSTITUTIONAL INVESTORS AND THEIR IMPORTANCE FOR THE AMSTERDAM FINANCIAL SYSTEM

EABH/Banque Lombard Odier/Schroders
London 26 October 2018

Joost Jonker

University of Amsterdam/IISH

Contents

- Why bother ?
- The charity origins
- From early Modern to Modern
- The long afterlife of a bright idea

Why bother ?

- One of six hallmarks of successful transition to modern finance (Sylla)
- Why some countries earlier than others ?
- What consequences of early transition ?

The charity origins

- Charities draw income from real estate
- Hospitals and guilds offer life-cycle risk cover
- Public corporations issue bonds and life annuities
- Instruments widely available, also to small investors (< 200 gld)
- Little connection to wider financial system

From early Modern to Modern

- New products: tontines (1650s), fire and life insurance companies (1700s), mutual funds (1770s)
    - Charity providers diversify from real estate into financial assets
    - Consumers obtain more choice
- Start of Merton's virtual innovation spiral

From early Modern to Modern

- Fire and life companies earliest in Britain
- Influence relatively small until later 19th century
- Mutuals flourish in Amsterdam : the *negotiatie*
  - Securitization develops from 1690s
  - Stock substitution takes over from 1770s
  - Strong boost to market development

NEGOTIATIE

onder de Zinſpreuk

EENDRAGT MAAKT MAGT.

Opgerigt te AMSTERDAM.

CONDITIEN.

Artikel I.

Deeze Negotiatie is onder 't oprigt van DE WEL EDELE HEEREN

DIRK BAS BACKER.

EN

FRANS JACOB HESHUYSEN.

Als COMMISSARISSEN hier toe verzogt en gecommitteerd.

En van den Makelaar ABRAHAM VAN KETWICH, als ADMINISTRATEUR.

En is beſtaande in diverſe Claſſen, alle onderling met elkanderen Gecombineerd en Verbonden, ieder Claſſe in Honderd Aandeelen; ieder Aandeel groot in Capitaal *f* 500 : —

Art. II.

Het Capitaal van ieder Claſſe deezer Negotiatie, beſtaat in de navolgende Effecten, als:

3 Obligatien op de DEENSCHE- en WEENER-BANKEN.
5 dito op de DEENSCHE TOLLEN, en HOLSTEYN.
5 dito op RUSLAND, en ZWEEDEN.
5 dito op BRUNSWYK, en MEKLENBURG.
5 dito op de SAXISCHE POSTERYEN, en BRABANDSCHE MOERLANDEN.
5 dito op de SPAANSCHE CANAALEN IMPERIAAL en TAOUSTE.
5 dito op de ENGELSCHE COLONIEN, onder Borgtogt en Guarantie van de Heeren *Hope* en *Comp.*, *Vernede* en *Comp.*, *J. Hodshon*, *Dodd* en *Raguette*, en *B. van Hemrigh*.
5 dito op ESSEQUEBO, ten Comptoire van de Heeren *J. van Rynevelt* en *Zoon*, *D. Chevalier*, *E. van den Helm Boddart*, *A. J. Heshuyſen* en *Comp.* en *D. W. van Vloten*.
5 dito op de BERBICE, ten Comptoiren van de Heeren *J. A. Charlon*, en *L. Schumacher*.
5 dito op de DEENSCHE AMERICAANSCHE EILANDEN, ten Comptoiren van de Heeren *Brown* en *van der Hoop*, *J. Hodshon*, *H. Hoffnung* en *Zoon*, *Lever* en *de Bruine*, en *Nauta Dinkou* & *Volkmar*.

50 Obligatien, ieder groot Een duizend Guldens, is te zamen in Capitaal *f* 50,000 —

En ieder Claſſe ten minſte in 20 à 25 differente ſoorten van bovenſtaande Effecten; dog niet meer als 2 of 3 Obligatien van een en deezelve Negotiatie, zynde verder in alles, zo veel mogelyk was, eene gelyke evenredigheid in acht genoomen.

ACTE VAN AANDEEL

Voor Vijf Honderd Dollars, in een gemeenschappelyk Bezit van een Capitaal van VYF MILLIOENEN Dollars Origineele Americaansche Fondsen, onder bewaaring en directie van

de Heeren { HOPE & C^t / R. en T. DE SMETH / W. en J. WILLINK, } te Amsterdam.

Het voorschreeven Capitaal van Vyf Millioenen Dollars Origineele Americaansche Fondsen is een gedeelte van het Fonds van Elf Millioenen en Twee Honderd en Vyftig Duizend Dollars, geerecerd door de VEREENIGDE STAATEN VAN NOORD-AMERICA, by Besluit of Acte van dato 10 November 1803. en ter Thesaurie van dezelve STAATEN reeds getransporteerd en verder te transporteeren op de gemeenschappelyke naamen van Heeren Bewaarders en Directeuren voormeld.

Van hetzelve Capitaal van Vyf Millioenen Dollars zullen door de VEREENIGDE STAATEN VAN NOORD-AMERICA worden betaald Interessen, tegens Zes pro cento in het Jaar, betaalbaar in Amsterdam, tot den Cours van Twee en een halve Guldens Hollandsch Courant geld per Dollar, en zal de Afslosing van het Capitaal zelve t[illegible] Thesaurie van dezelve STAATEN gedaan worden by Jaarlykfche Termynen van niet minder dan een Vierde part ydere, van welken de Eerfte zal aanvang neemen Vyftien Jaaren na den 21 October 1803.

By ydere Acte van Aandeel in deeze gemeenschap zyn uitgegeeven agttien Coupons van uitdeeling, tegens intrekking van ydere van welk[illegible]p 1°. January 1805. en vervolgens tot 1°. January 1822. inclusive, uit de Interessen van de VEREENIGDE STAATEN voormeld als dan ontfangen, door Heeren Bewaarders en Directeuren zal worden betaald Vyf en Vyftig Guldens Hollandsch Courant geld; ten waare de Aandeelen vroeger losbaar worden, als na welker aankondiging by de Hollandsche Couranten de Coupons van volgende Jaaren, tot de losbaare Aandeelen behoorende, zullen zyn nul en van geener waarde.

The long afterlife of a bright idea

- By 1800 about estd 200 million guilders in *negotiaties*
- Stock substitution into guilder certificates standard for issuing foreign and later Dutch securities
- Issues managed by an *administratiekantoor* (trust office) :
  - Splits dividend from voting rights
  - Bolsters shareholder power in US railroad reorganizations
  - Key defence technique against take-over threats from 1908
  - ‘Dutch discount’ unproven


PHILIPS
06209

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Carlos Slim admits defeat in €7.2bn takeover battle for KPN

Daniel Thomas and **Anousha Sakoui** in London and **Jude Webber** in Mexico City

OCTOBER 17, 2013

6

Carlos Slim, the Mexican tycoon who controls América Móvil, has admitted defeat in a gruelling €7.2bn takeover battle for KPN after the intervention of an independent foundation linked to the Dutch telecoms group.

Dutch government to float ABN Amro

State to recoup some of the €22bn it ploughed into bailed-out lender

Duncan Robinson in Brussels OCTOBER 27, 2015

5

ABN Amro will return to the private sector via an initial public offering, seven years after its €22bn bailout by Dutch taxpayers.

The Amsterdam-based bank confirmed that it intended to float by the end of this year, with analysts predicting that the lender could be worth more than €15bn— crystallising a large loss for the Dutch government.

PostNL shares sinking 6% as it rejects offer from Belgium's bpost

Nathalie Thomas NOVEMBER 11, 2016

Dutch postal company PostNL has sunk to the bottom of the Stoxx 600 index in early trading on Friday after it rebuffed a takeover offer from Belgian rival bpost.

In a statement on Friday, PostNL said bpost's offer – which was pitched at €2.825 in cash plus 0.1202 bpost share for each PostNL share – "does not represent a sufficiently compelling value proposition" for its shareholders. The offer currently values each PostNL share at €5.40.

The shares are sinking 6 per cent in early trading on Friday to €4.45, well below the offer value.

The long afterlife of a bright idea

- Simplification of the *administratiekantoor*, 1980s:
  - No longer a corporation, but a *stichting* (foundation)
  - Armed with the right to issue prefs, no longer loaded with the securities themselves
- Splitting dividend from voting rights finds new application : tax avoidance

The long afterlife of a bright idea

- Probably first stichting to safeguard ownership and avoid taxes IKEA, 1982
- 2002: no. of *Stichting Administratiekantoor* estimated at 12,500, gross income flow €3.6 tn, 8 times Dutch GDP
- The key institution at the heart of Tax Haven Netherlands
- Split of dividend and voting rights ties them back to 18th century mutuals

Conclusion

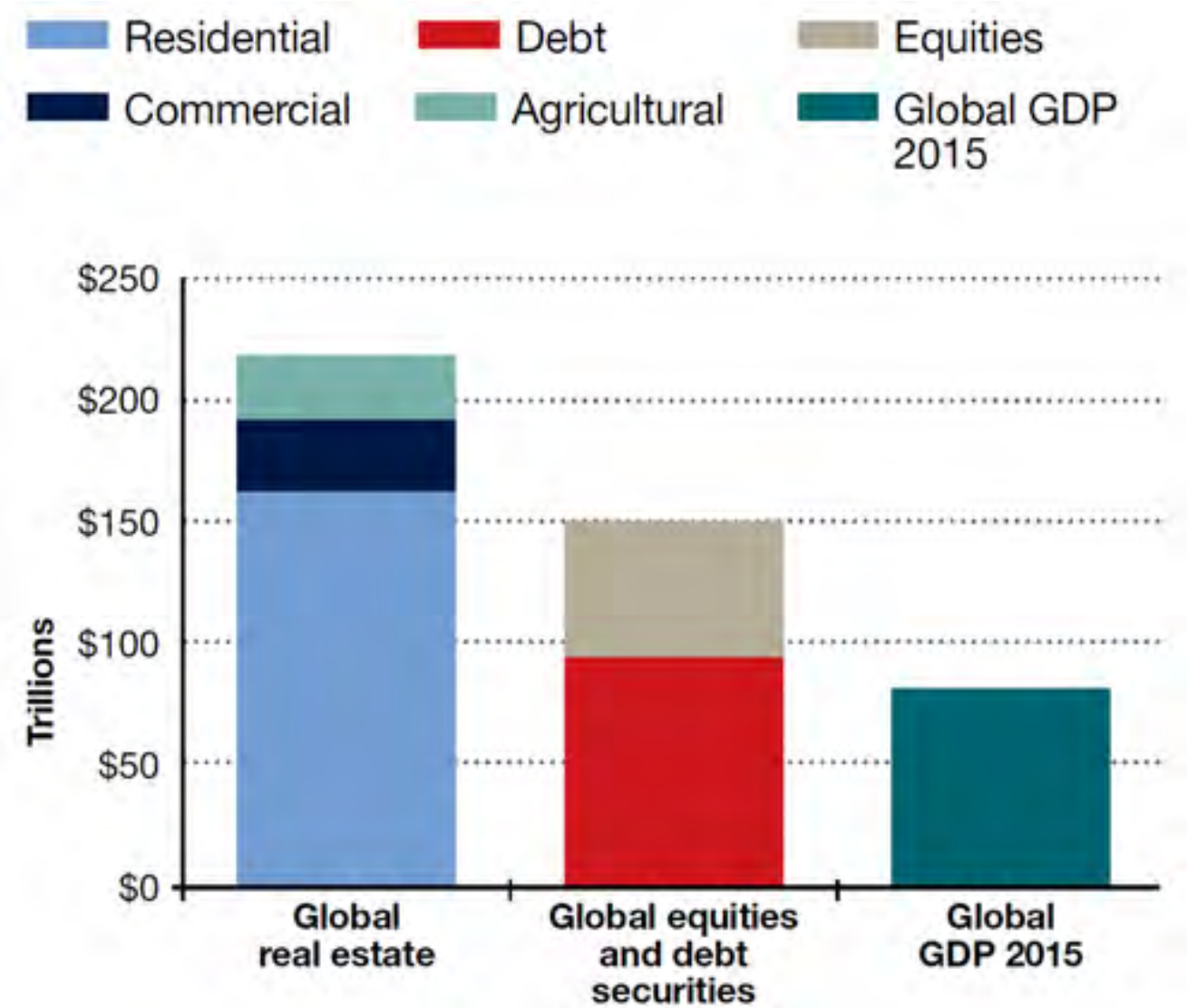
- Early rise of institutional investors Amsterdam consequence of precocious market development
- Securitization, stock substitution, and splitting rights standard techniques by 1770
- Successive transformations adapt them to ever more ingenious uses
- Sets financial system apart from others

The Rate of Return on Everything, 1870–2015

Òscar Jordà[†] Katharina Knoll[‡] Dmitry Kuvshinov[§]
Moritz Schularick[¶] Alan M. Taylor[✠]

[†] Federal Reserve Bank of San Francisco; University of California, Davis
[‡] Deutsche Bundesbank
[§] University of Bonn
[¶] University of Bonn; CEPR
[✠] University of California, Davis; NBER; CEPR

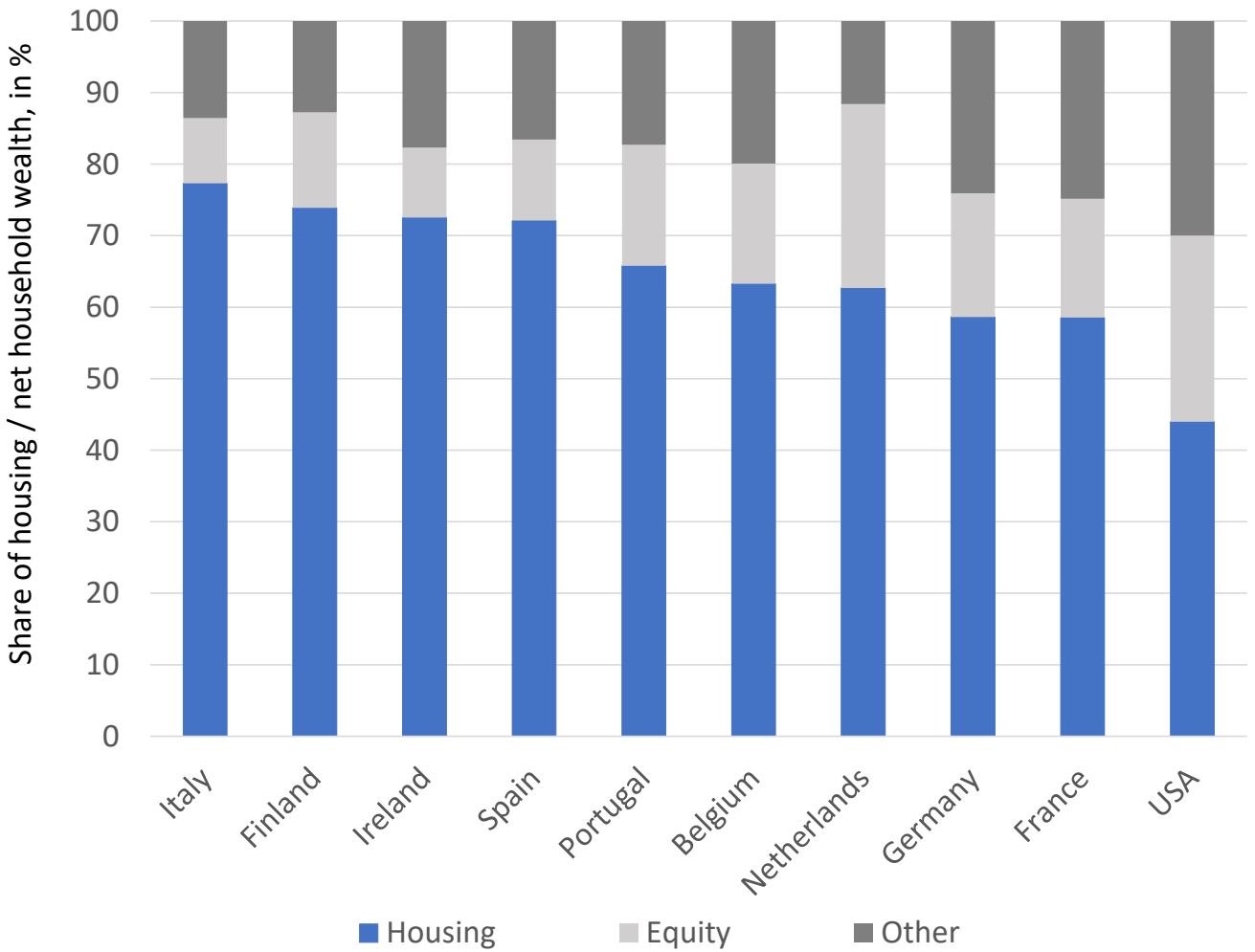
Real estate is the largest asset class



Source: Savills Research

Households are betting the house

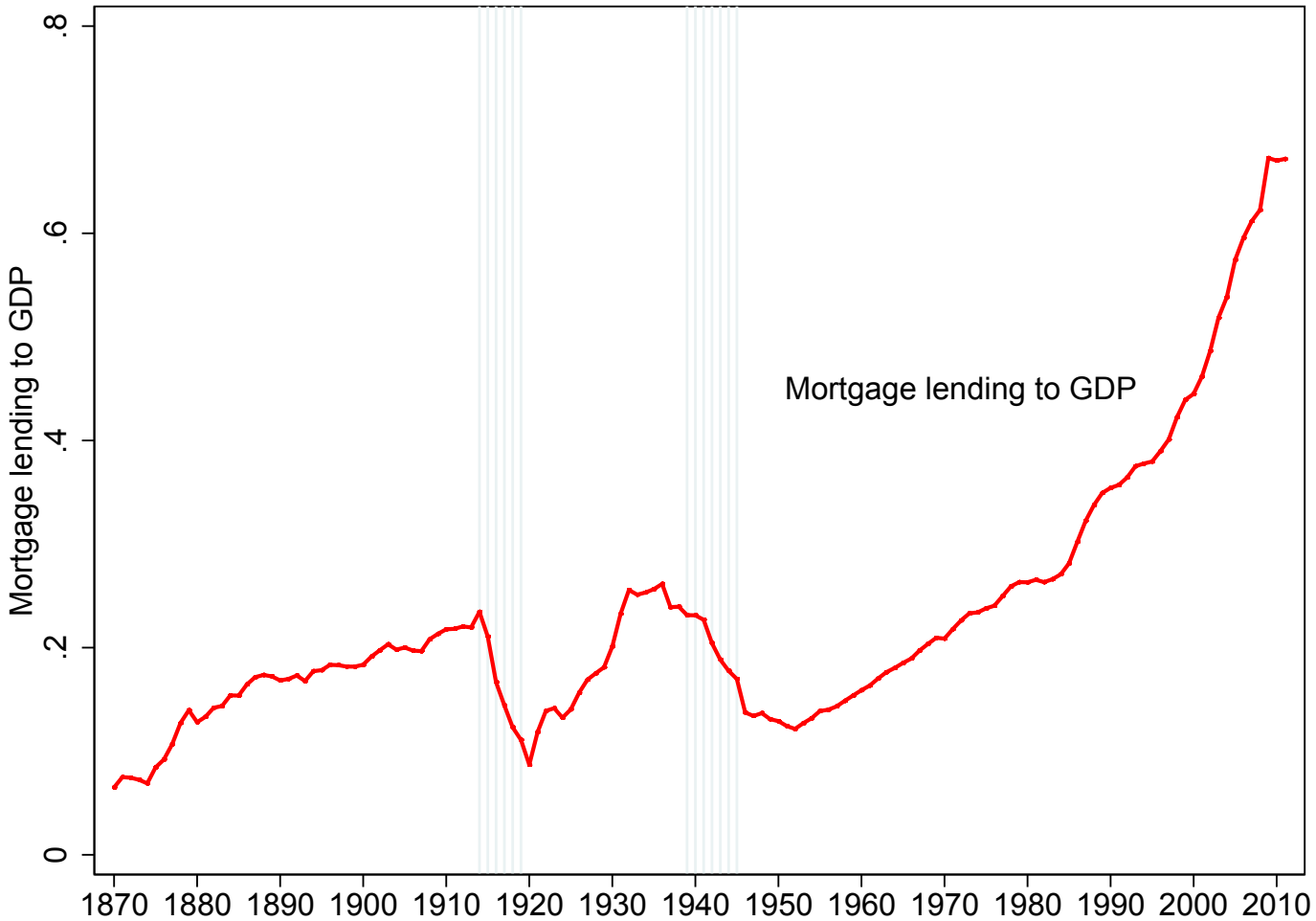
Housing is the most important household asset.



Source: ECB Household Portfolio Survey, Flow of Funds.

The great mortgaging

Housing loans are the main asset of the financial system.



Source: Jorda, Schularick, Taylor, JME 2015

Residential real estate

Housing is the asset that matters most, but it is the asset we know least about.

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A prominent example:

- The long-run equity risk premium is 6% (Mehra and Prescott 1985)

Residential real estate

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- What is the housing risk premium?

Residential real estate

Housing is the asset that matters most, but it is the asset we know least about.

A prominent example:

- The long-run equity risk premium is 6%
  (Mehra and Prescott 1985)
- What is the housing risk premium?
- How do housing returns vary over time and across space?

Our research

This paper presents:

1. Long-run returns on the main household asset: residential real estate.
2. More comprehensive and accurate long-run return data for stocks and risk-free rates.
3. Constructs economy-wide returns on wealth.

What we find

1. $r_{housing} \approx r_{equities}$ but $r_{housing}$ less volatile,less correlated internationally
2. r_{safe} relatively volatile (ex post): today no lower than in other eras, 1980s high
3. $r_{wealth} >> g$ across countries and over time . . .

New data on global returns

Largest ever dataset on total returns in 16 economies over 145 years

Country	Gov. Bills	Gov. Bonds	Equities	Housing
Australia	1870–2015	1900–2015	1870–2015	1901–2015
Belgium	1870–2015	1870–2015	1870–2015	1890–2015
Denmark	1875–2015	1870–2015	1893–2015	1876–2015
Finland	1870–2015	1870–2015	1896–2015	1920–2015
France	1870–2015	1870–2015	1870–2015	1871–2015
Germany	1870–2015	1870–2015	1870–2015	1871–2015
Italy	1870–2015	1870–2015	1870–2015	1928–2015
Japan	1876–2015	1881–2015	1886–2015	1931–2015
Netherlands	1870–2015	1870–2015	1900–2015	1871–2015
Norway	1870–2015	1870–2015	1881–2015	1871–2015
Portugal	1880–2015	1871–2015	1871–2015	1948–2015
Spain	1870–2015	1900–2015	1900–2015	1901–2015
Sweden	1870–2015	1871–2015	1871–2015	1883–2015
Switzerland	1870–2015	1900–2015	1900–2015	1902–2015
UK	1870–2015	1870–2015	1871–2015	1900–2015
USA	1870–2015	1871–2015	1872–2015	1891–2015

Statement of the obvious: It took years, lots of work. . .
. . .but it gets <1 minute here today

What's new?

- **New: Housing total returns, prices and rental yields**
  Before: scattered rents/returns for short periods, house prices from Knoll, Schularick, Steger (AER 2017)
- **New: Equity total returns, prices and dividend yields**
  Before: commercial providers, dividends and documentation scarce, new prices and dividends here
- **New: Govt. bond total returns and yields, bill yields**
  Before: yields existed, returns from commercial providers

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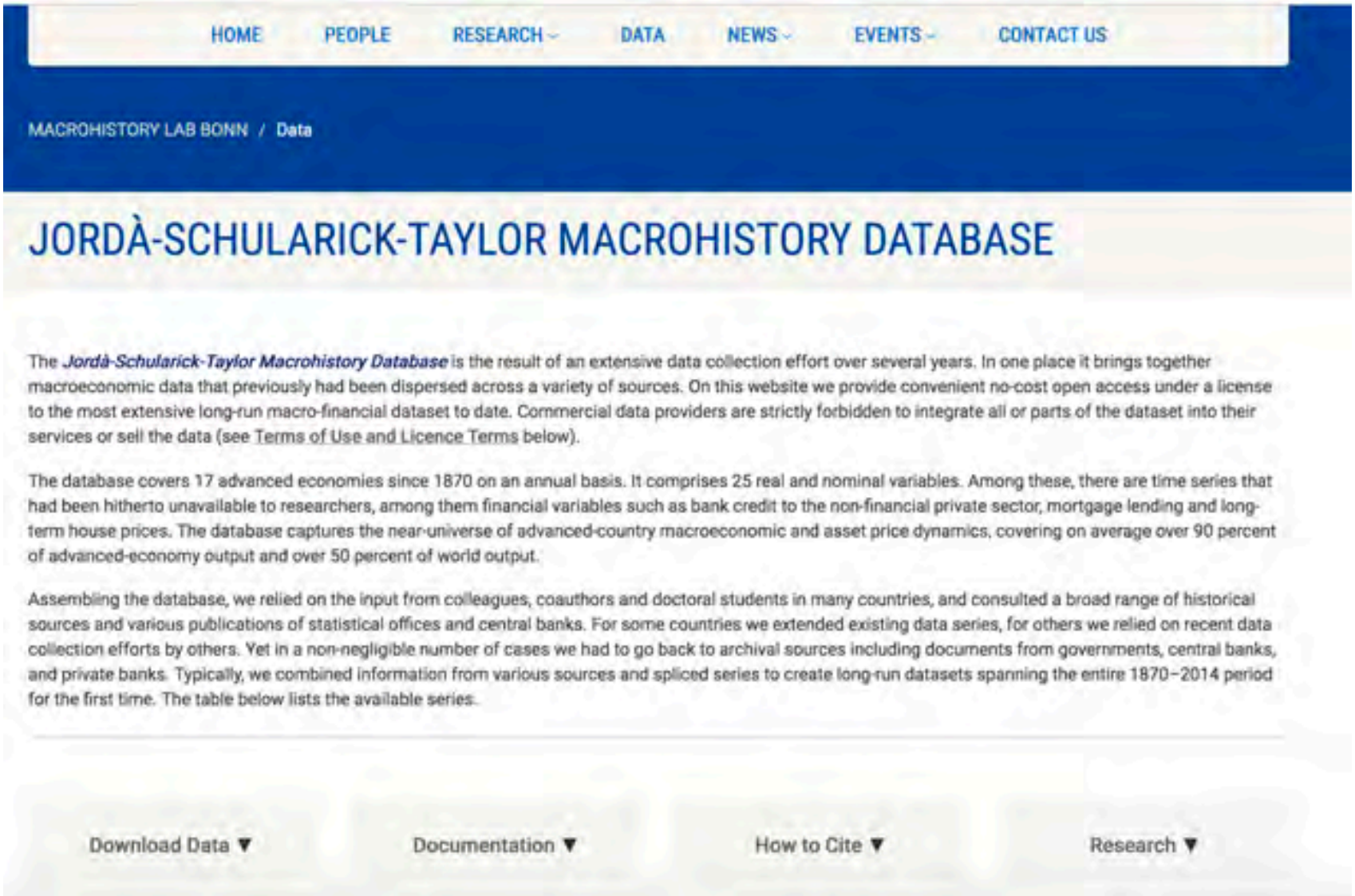
  Before: yields existed, returns from commercial providers
- **Thanks to everyone who helped!**
  It will all be here as a public good:

www.macrohistory.net/data/



Long-run returns

Return calculation

- **Total real return:** $r = (1 + \overbrace{\{\Delta P/P + Y\}}^{R})/(1 + \pi) - 1$
- **Extensive sensitivity checks:**
  Taxes, transaction costs, weighting, survivorship bias, rental yield benchmarks, stock market closures, leverage, location effects, compare to REITS, etc.

The rent-price approach

Rental yields (RI is rent index, HPI is house price index):

$$\frac{RI_{t+1}}{HPI_{t+1}} = \left[\frac{(RI_{t+1}/RI_t)}{(HPI_{t+1}/HPI_t)}\right]\frac{RI_t}{HPI_t}$$

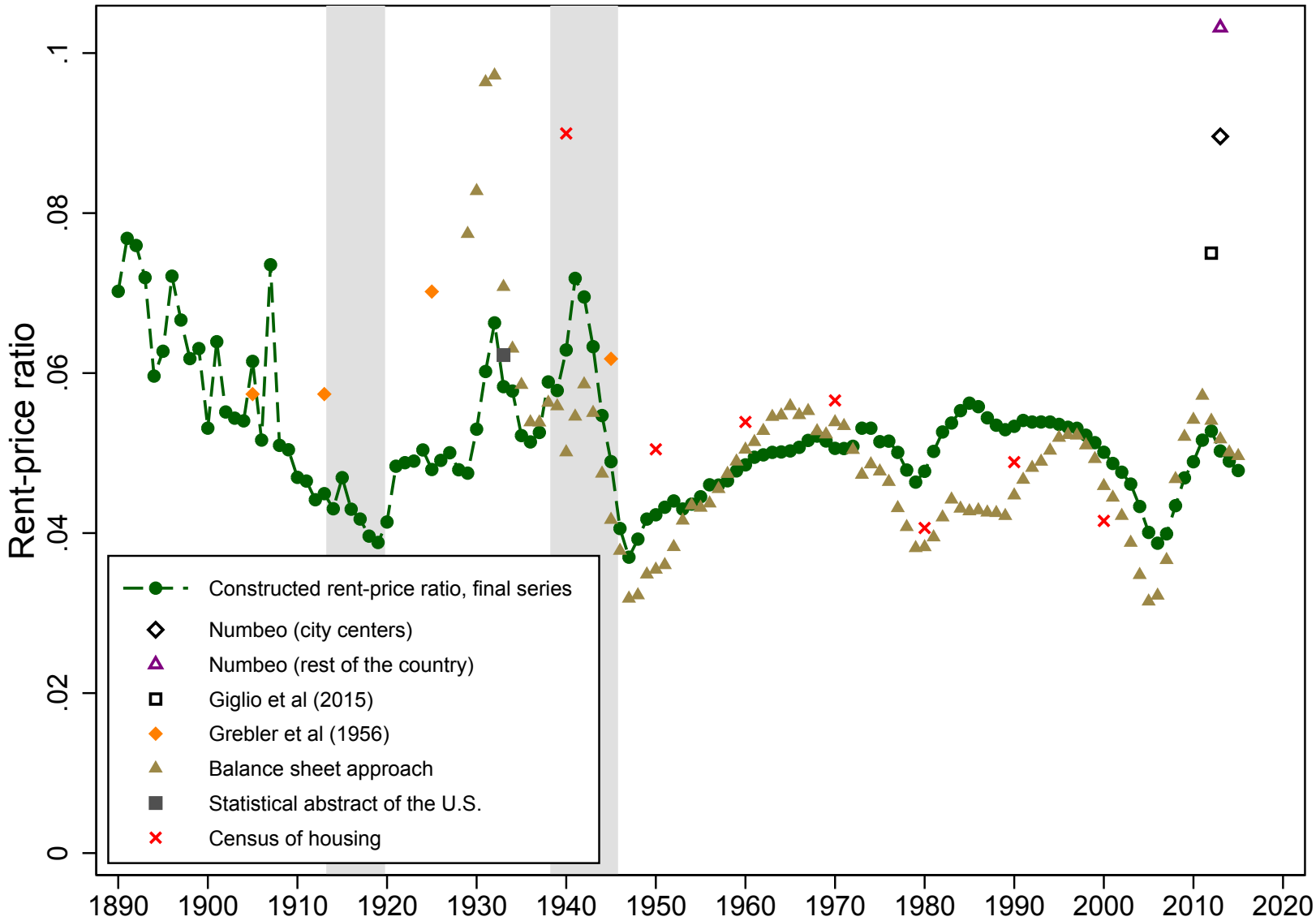
Total returns:

$$R_{h,t+1} = \frac{RI_{t+1}}{HPI_t} + \frac{HPI_{t+1} - HPI_t}{HPI_t}$$

- Basic intuition: start with diversified **net** rent-price ratio (excludes maintenance, management, etc.)
- Iterate forward/backward using **rent growth** and **constant-quality house prices**
- Corroborate using **balance sheet approach** and **historical rental yield** data

Reconciling multiple sources

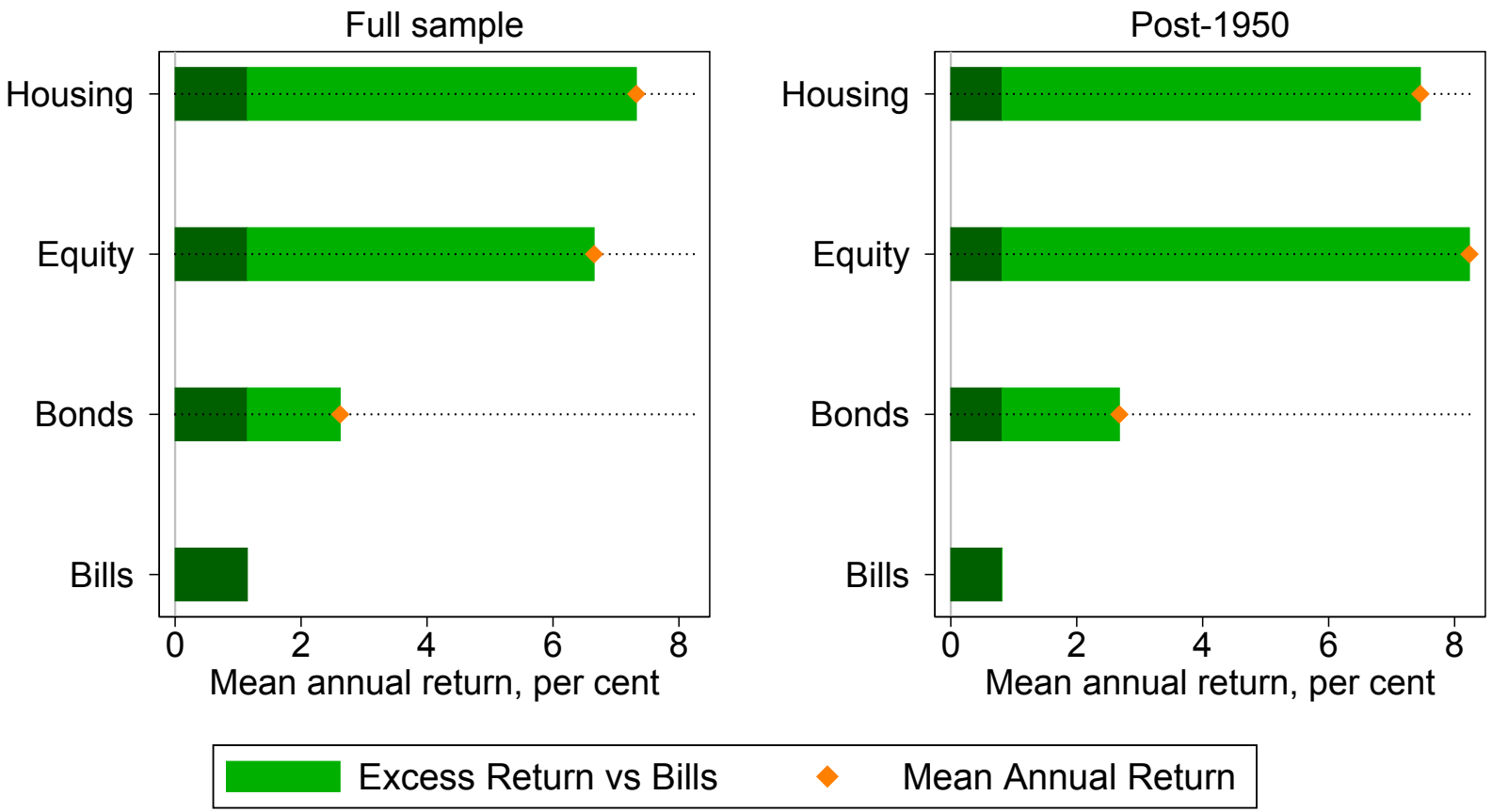
Example: USA



Aggregate trends

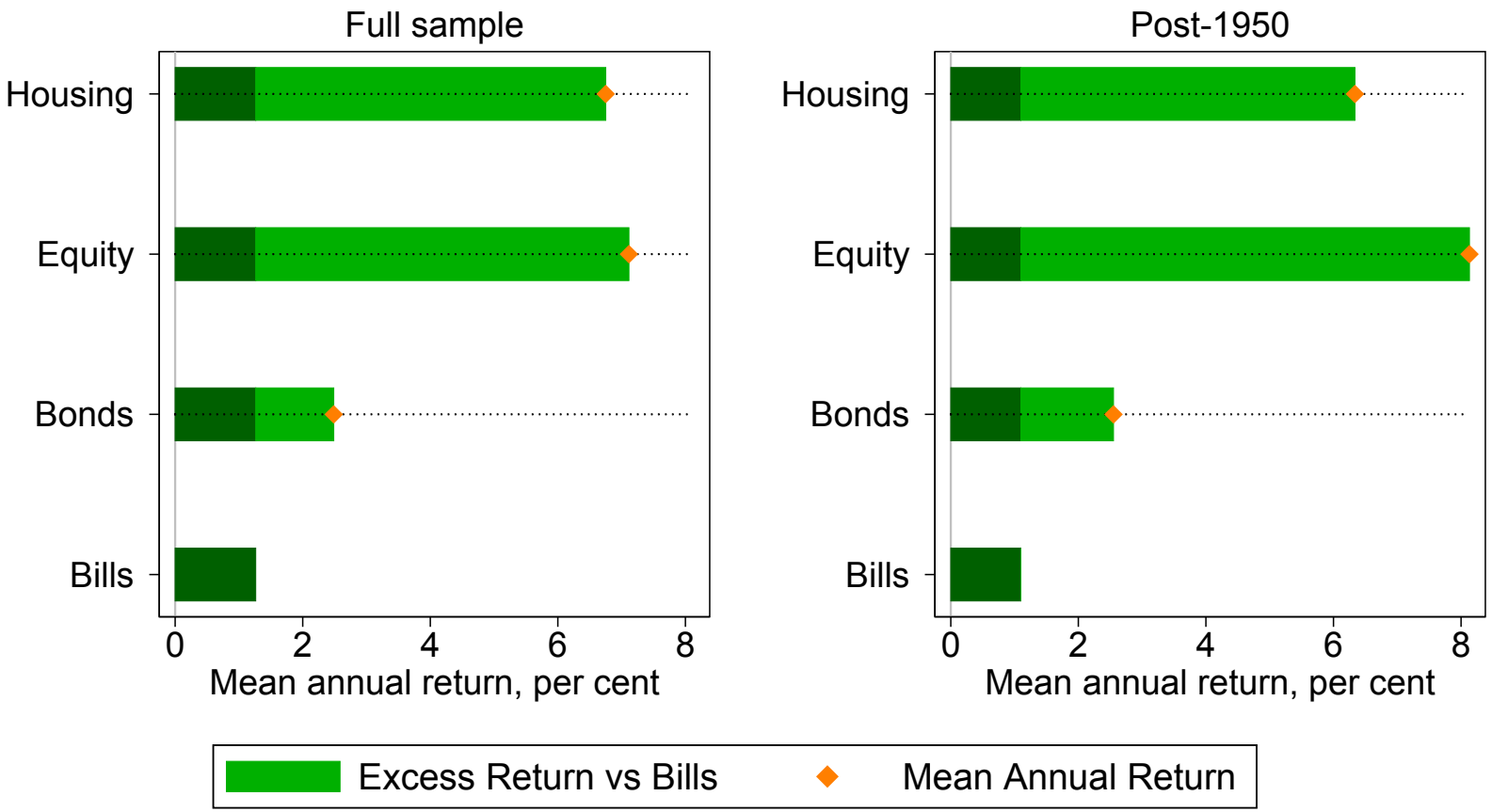
Global returns

equal weights



Global returns

GDP weights



Total returns since 1870

	Real returns				Nominal Returns			
	Bills	Bonds	Equity	Housing	Bills	Bonds	Equity	Housing
Full sample:								
Mean return p.a.	0.98	2.50	**6.89**	**7.0**5	4.60	6.10	10.75	11.06
Std.dev.	6.01	10.74	21.94	9.98	3.33	8.91	22.78	10.70
Geometric mean	0.78	1.94	**4.64**	**6.61**	4.55	5.74	8.55	10.59
Mean excess return p.a.	.	1.53	5.91	6.07				
Std.dev.	.	8.38	21.43	9.86				
Geometric mean	.	1.19	3.81	5.64				
Observations	1739	1739	1739	1739	1739	1739	1739	1739
Post-1950:								
Mean return p.a.	0.87	2.77	**8.28**	**7.44**	5.40	7.31	12.99	12.31
Std.dev.	3.43	9.94	24.20	8.88	4.04	9.80	25.09	10.15
Geometric mean	0.81	2.30	5.54	7.10	5.33	6.89	10.28	11.90
Mean excess return p.a.	.	1.91	7.41	6.57				
Std.dev.	.	9.20	23.77	9.19				
Geometric mean	.	1.51	4.79	6.21				
Observations	1016	1016	1016	1016	1016	1016	1016	1016

Note: Annual global returns in 16 countries, equally weighted. Period coverage differs across countries. Consistent coverage within countries. Excess returns are computed relative to bills.

More checks

- Compare to REITS
- Taxation
- Effect of leverage

La Fourmi immobiliere

TABLEAU 1 **Les acquisitions d'immeubles parisiens par La Fourmi Immobilière de 1899 à 1913**

ADRESSE	Date Achat	Année Construction	Surface en m^2	Prix Achat en 1000 F courants	Prix Achat en 1000 F 1995	Valeur 1995 en millions de F	Revenu brut annuel (1) %
11, chaussée d'Antin – 16e	1899	1897	2.391	1.194,9	22.807,9	64,0	
16, rue de Lubeck – 16e	1901	1890	1.170	555,0	10.593,8	34,0	6,0
34, rue Pierre-Sémard – 9e	1902	1900	1.111	332,7	6.351,3	22,0	6,3
80, rue du Rocher – 8e	1903	1900	1.995	780,0	14.888,6	40,0	6,5
5, rue du 4-Septembre – 2e	1904	1870	2.167	750,0	14.316,0	31,0	
4, rue Léon-Cosnard – 17e	1905	1903	1.257	408,0	7.787,9	27,5	7,0
17, rue de Longchamp – 16e	1906	1900	1.543	382,5	7.909,7	36,0	6,6
25, rue du Colonel Moll – 17e	1906	1900	1.017	595,0	12.304,0	27,0	7,0
32, boulevard Poissonnière – 9e	1907	1900	1.138	1.045,0	19.947,0	19,0	6,0 (net)
63bis, rue Danrémont – 18e	1908	1906	1.584	420,0	8.017,0	30,0	7,8
21, rue Poncelet – 17e	1909	1900	1.603	330,0	6.299,0	31,0	
40, rue des Abbesses – 18e	1909	1907	1.966	560,0	10.689,3	34,0	
121, rue de Courcelles – 17e	1910	1900	1.156	500,0	9.544,0	27,0	
7, rue Saint-Senoch – 17e	1911	1904	1.934	737,0	12.192,2	43,0	7,1
16, rue Pérignon – 7e	1913	1900	1.902	598,0	9.892,7	46,0	7,4
TOTAL			23.934	9.570,6	173 540,4	511,5	

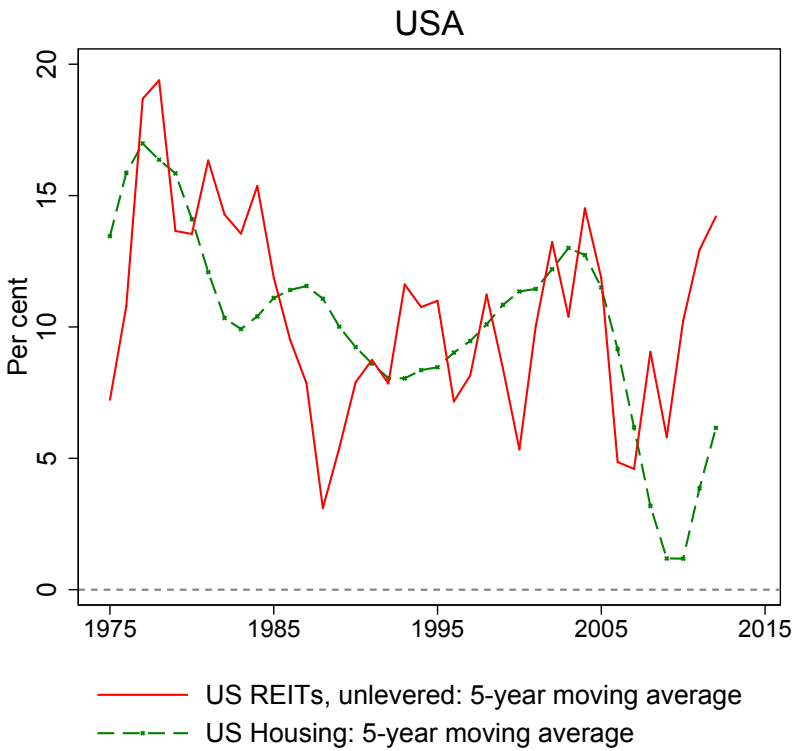
(1) Revenu brut annuel au moment de l'acquisition (qui est souvent précisé dans le *Rapport annuel* de l'année suivante, qui décrit l'opération d'achat.)

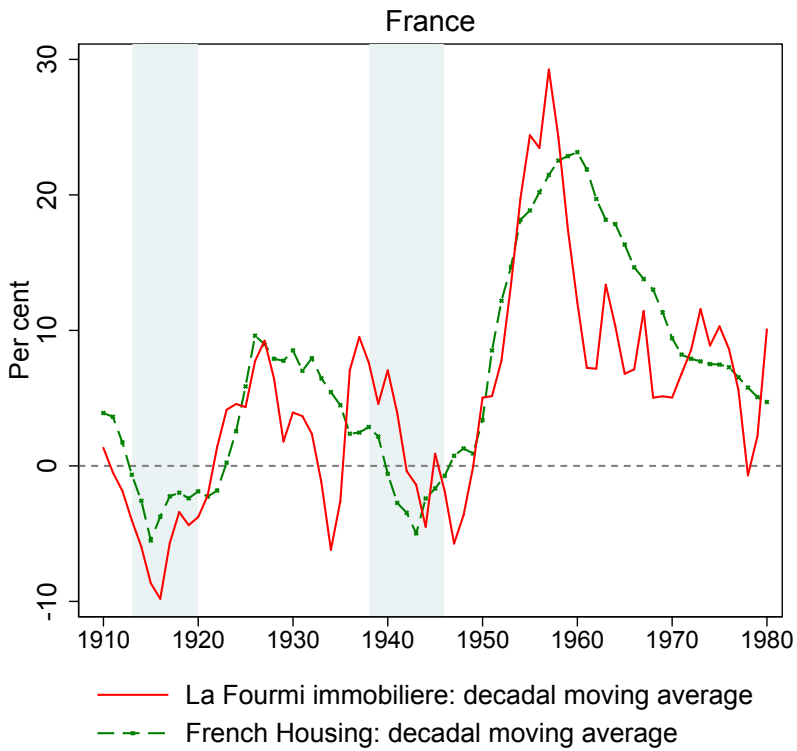
Comparing French housing return with La Fourmi

	Fourmi immobiliere	French Housing	French Equities
Mean return p.a.	16.93	15.69	8.79
Std.dev.	31.35	10.37	24.54
Observations	87	87	87

Note: Arithmetic average annual returns. Consistent sample coverage.

Housing returns compared to REITS



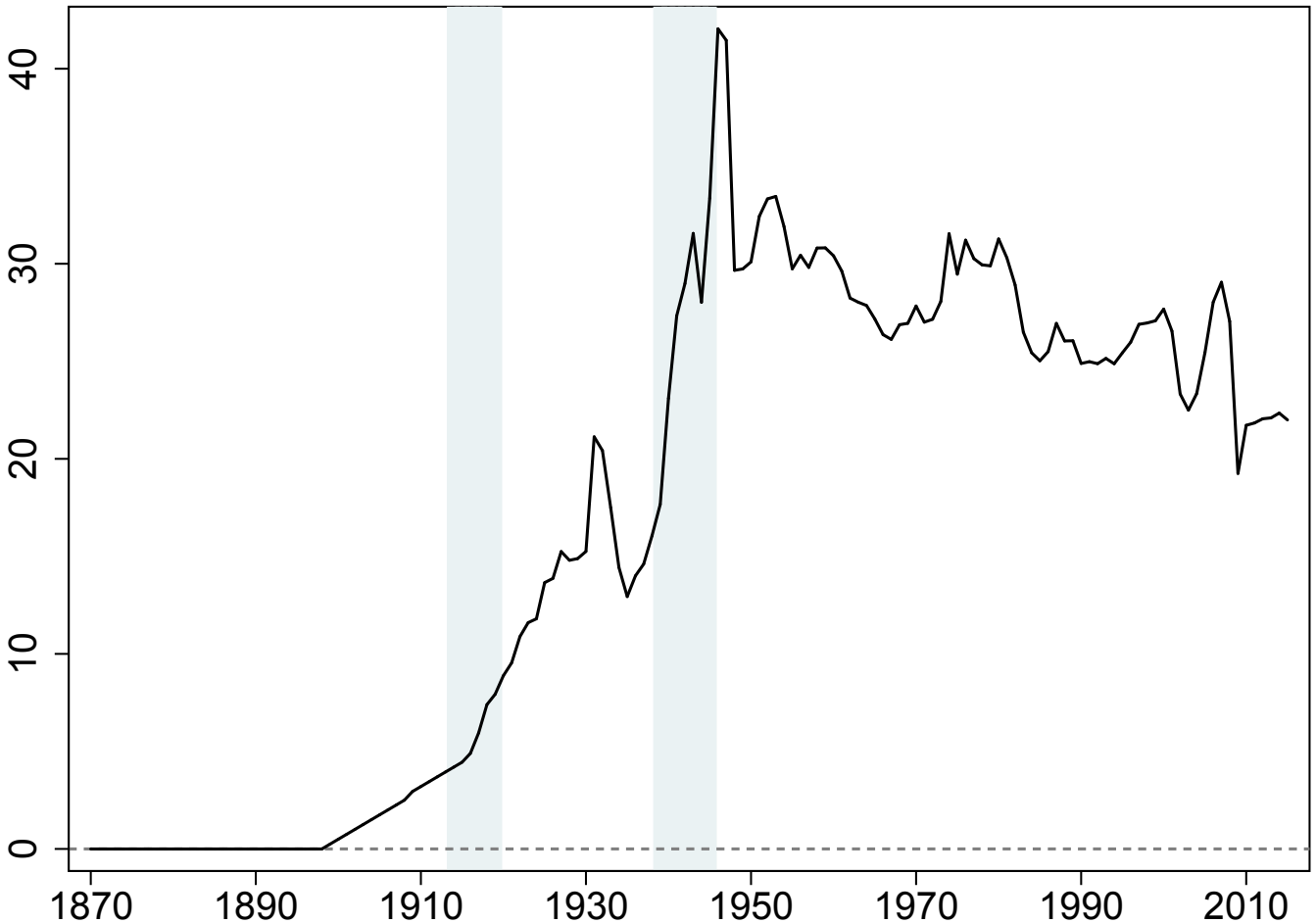


Taxation

- All our returns are pre-tax (too much variation in property and capital income taxation to track)
- But: corporate profits are post-tax.
- Does it make a difference?
- Clearly not for households as investors, but fundamentally.

History of corporate taxation

Figure: Effective corporate tax rate, average of 5 countries



Note: Average effective tax rate in Australia, France, Germany, Japan and US, equally weighted. Japanese tax rate interpolated between 1900 and 1930. Effective tax rate is total taxes paid / net corporate profits. Where effective data are not available, we extrapolate the series using statutory (top marginal) tax rates.

Leverage

- Our housing returns are returns on asset.
- Stock returns are returns on equity.
- Solution: relever housing or deleverage equity returns.

Leverage of US corporates, 1920-today

Source: Graham/Leary/Roberts (2014)

Returns: deleveraged and tax adjusted

	Baseline	Deleveraged	Adjusting dividends	Adjusting profits
Australia	7.88	6.57	6.85	7.47
France	3.97	3.12	3.27	3.46
Germany	6.85	5.85	5.94	5.97
Japan	6.09	4.85	5.22	6.72
United States	8.46	7.11	7.47	8.70

Note: Arithmetic average of deleveraged annual equity returns. Returns are deleveraged using data on debt/capital of U.S. firms. Period coverage differs across countries. Consistent coverage within countries.

Returns across countries

And the winner is:

And the winner is: Finland

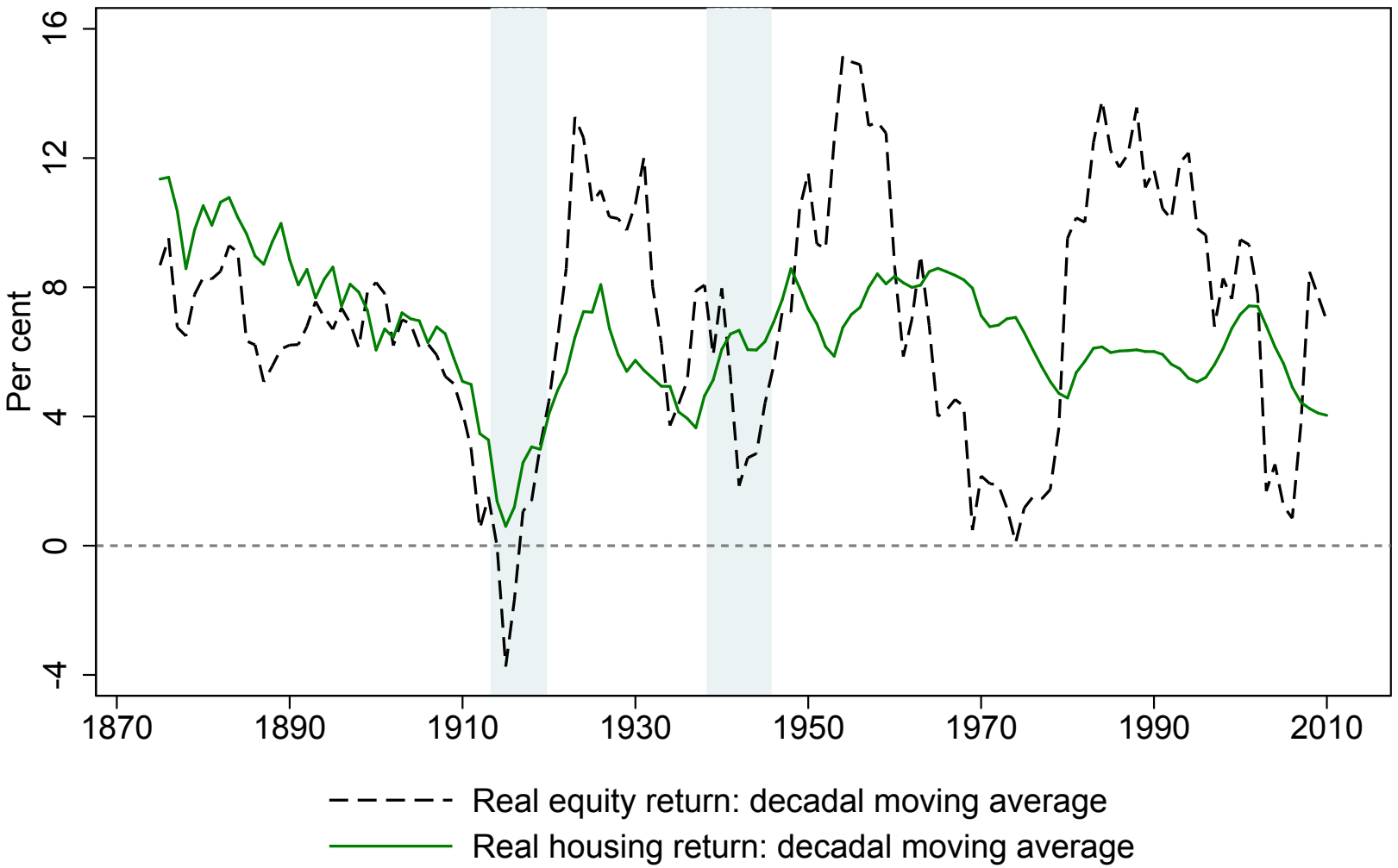
	Bills	Bonds	Equity	Housing
Australia	1.29	2.26	7.75	6.54
Belgium	0.70	2.87	6.78	8.64
Denmark	2.64	3.24	7.20	8.17
Finland	0.08	4.25	**9.98**	**9.58**
France	-0.48	1.44	4.06	7.34
Germany	2.65	4.03	6.85	7.82
Italy	1.37	3.19	7.32	4.77
Japan	0.39	2.18	6.09	6.54
Netherlands	0.78	1.85	7.09	7.28
Norway	0.90	2.29	5.95	8.03
Portugal	-0.48	1.37	4.37	6.31
Spain	-0.03	1.39	5.93	5.09
Sweden	1.56	3.14	7.98	8.30
Switzerland	0.81	2.33	6.90	5.77
UK	1.15	1.96	7.20	5.36
USA	**1.45**	**2.26**	**8.39**	**6.03**
Average, unweighted	1.15	2.62	6.65	7.32
Average, weighted	1.26	2.49	7.11	6.75

Decomposition of returns

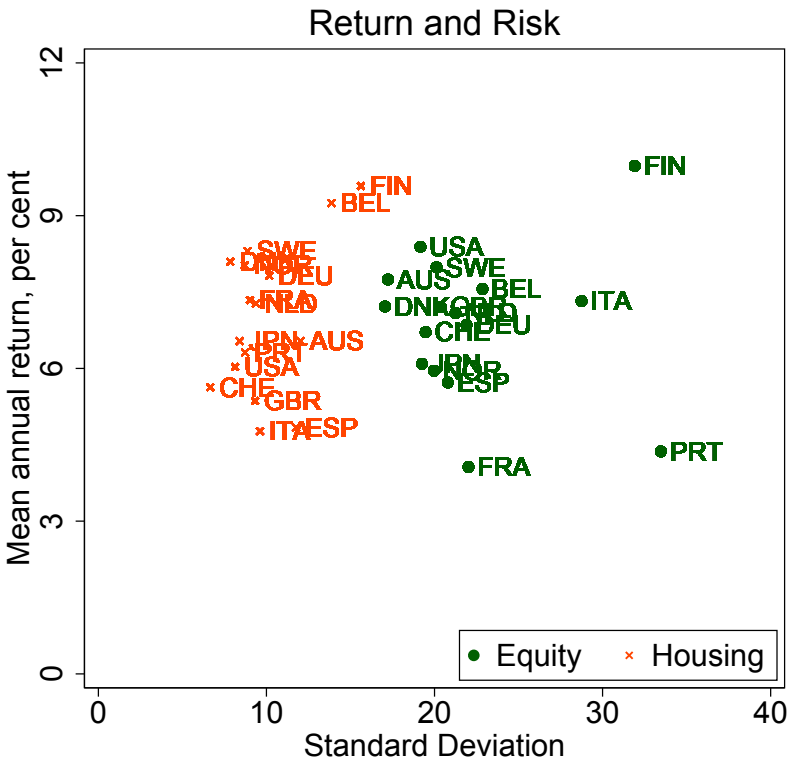
	Housing		Equity	
	All countries	U.S.	All countries	U.S.
Yield	5.5	5.3	4.2	4.4
Real capital gain	1.5	0.7	2.7	4.0
Total return	7.0	6.0	6.9	8.4

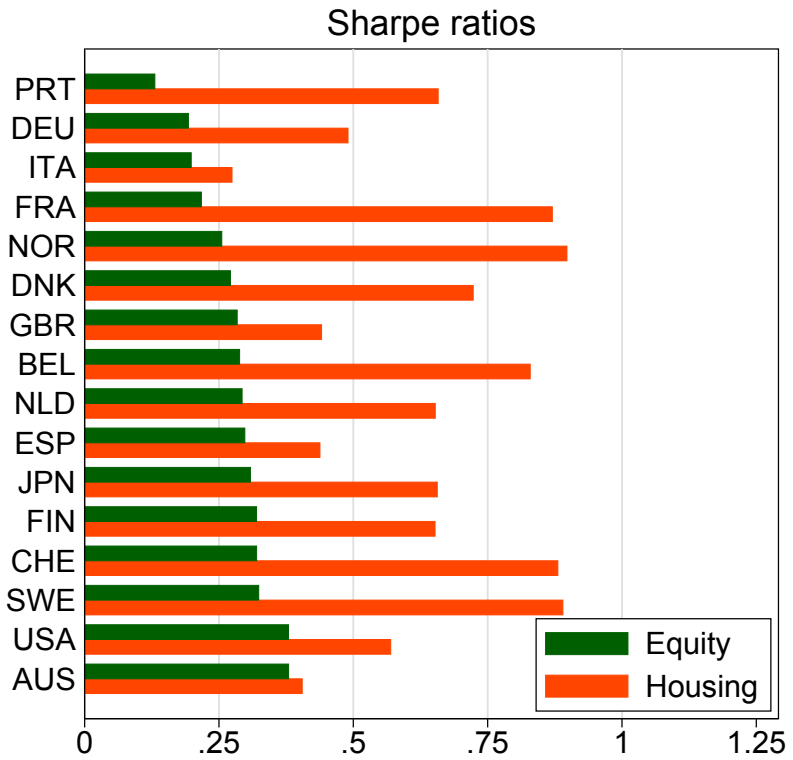
Note: annual returns, pooled over countries.

Returns on equities versus housing



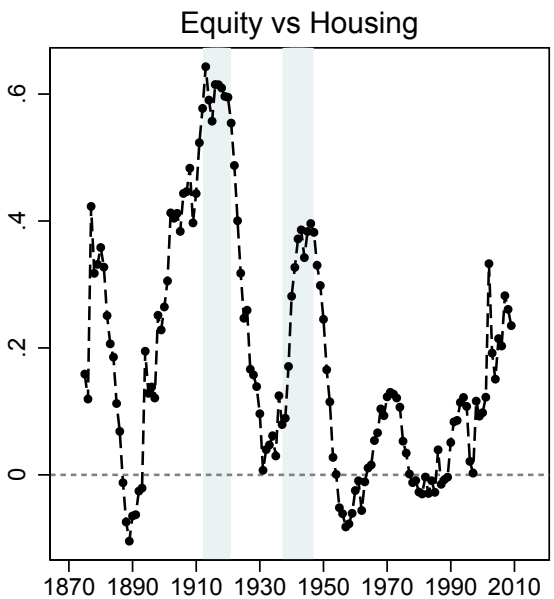
Risk and return of equities and housing

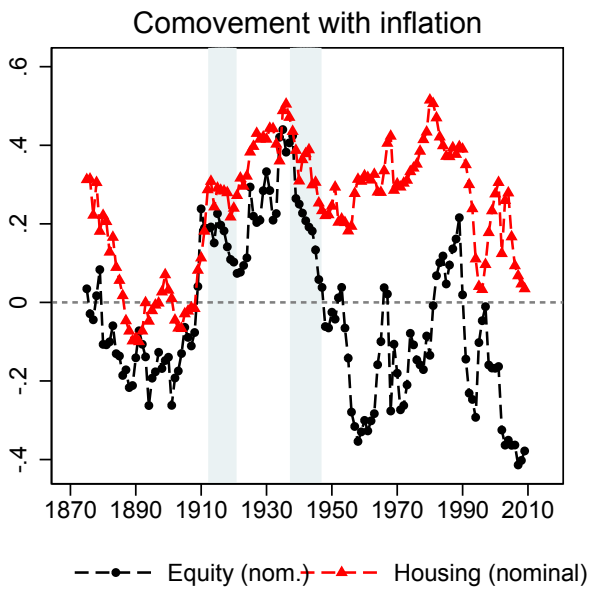


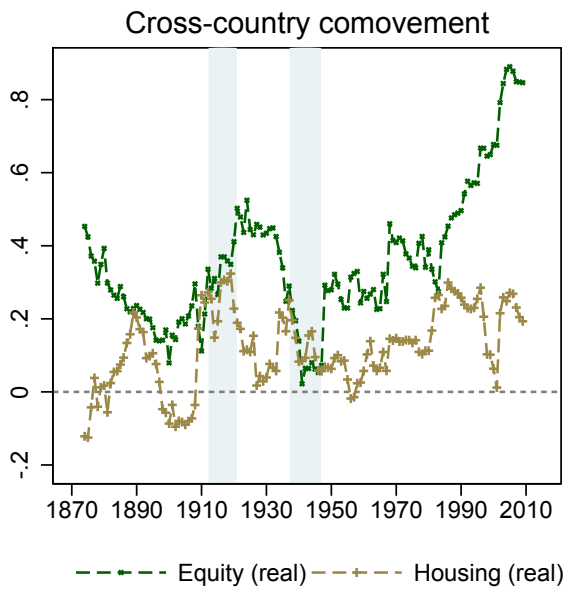


Returns on equities versus housing

Correlations



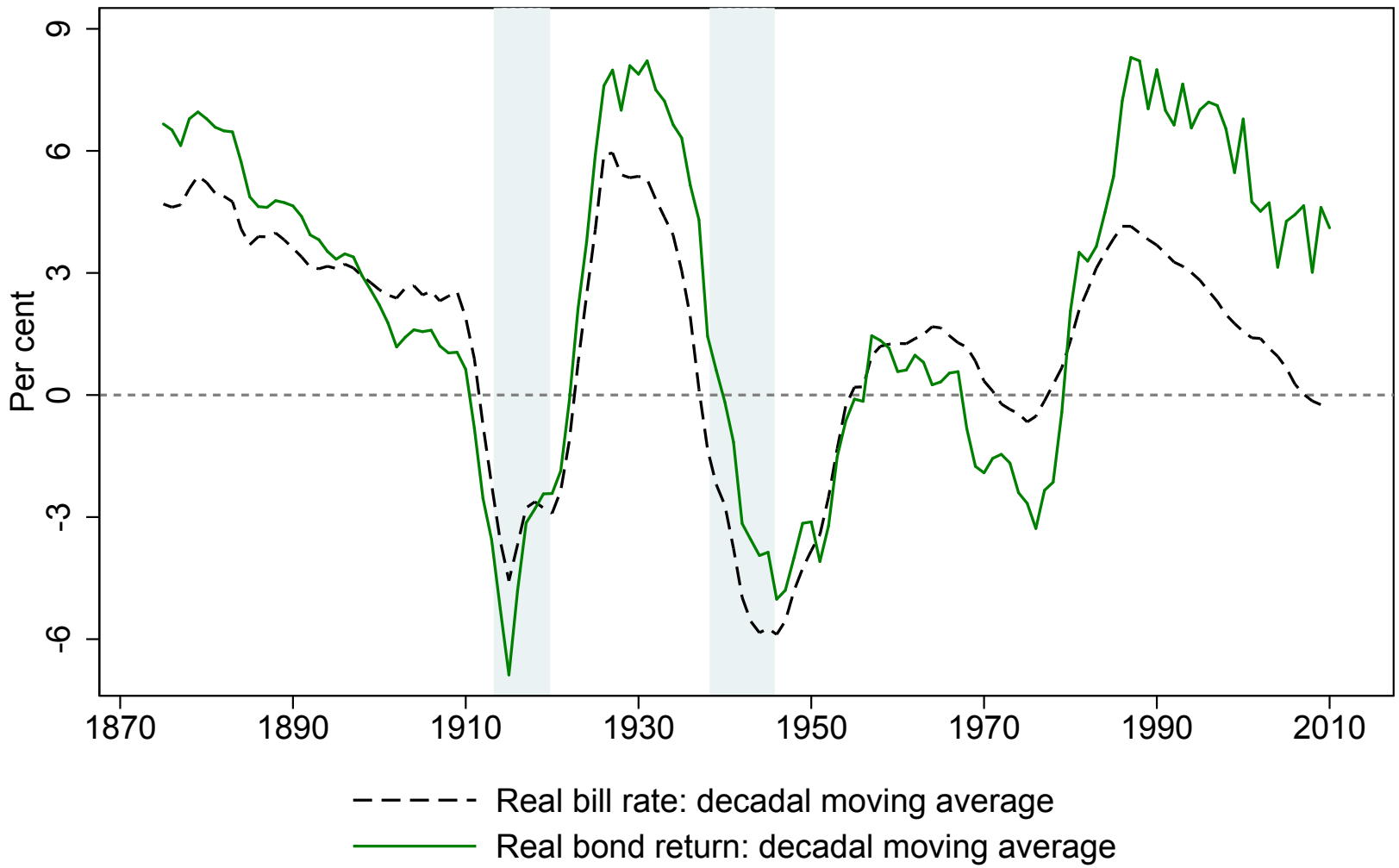




$$Corr_{i,t} = \frac{\sum_j \sum_{k \neq j} Corr(r_{i,j,t \in T}, r_{i,k,t \in T})}{\sum_j \sum_{k \neq j} 1}$$

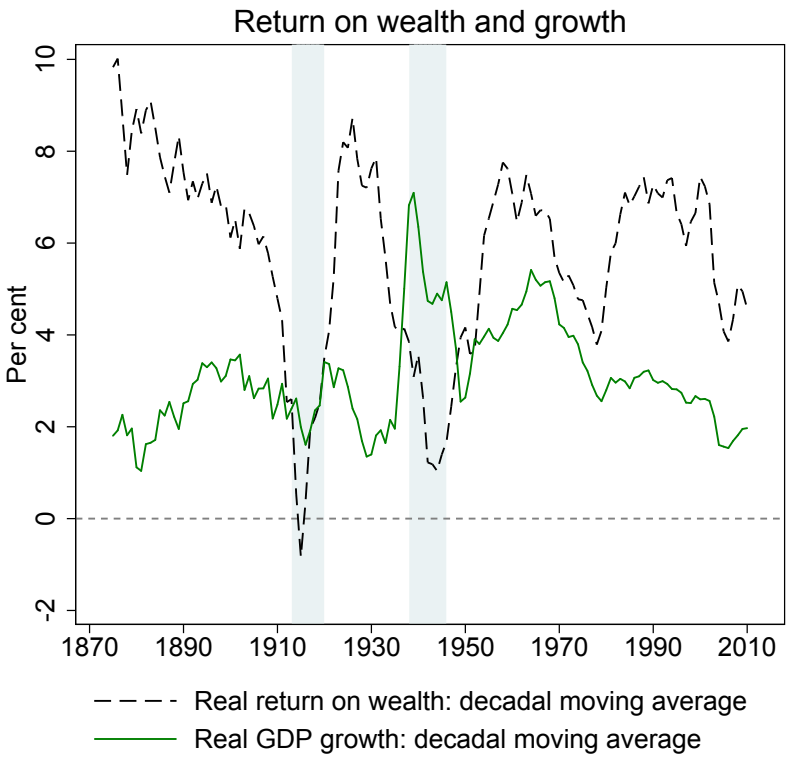
for asset i, $T = (t-5, t+5)$; j and k denote the country pairs

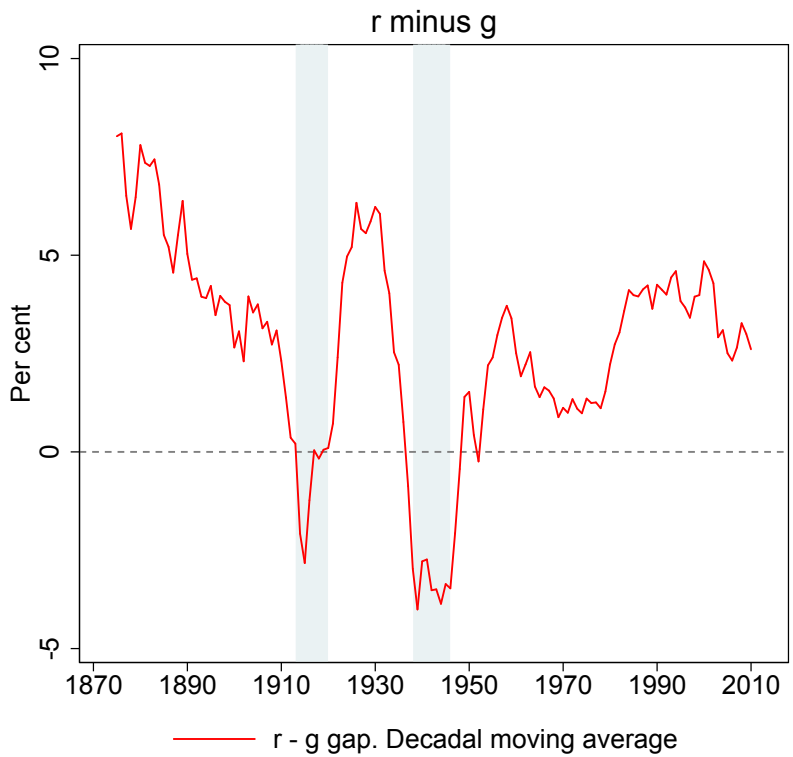
Returns on bills versus bonds



Returns on total wealth and growth

r > *g*





Main takeways

1. Long-run housing returns similar to equity returns
2. Safe returns more variable than risky returns
3. $r \gg g$ across time and countries
4. Cross-country equity returns increasingly correlated, but not housing

The Big Bang:
Stock Market Capitalization in the Long Run

Dmitry Kuvshinov and Kaspar Zimmermann
University of Bonn

Institutional Investors Conference, London

October 2018

Motivation

- Market capitalization matters for ...
  - ... aggregate wealth dynamics
  - ... inequality of wealth and income
  - ... economic activity
- Economists use market capitalization to measure ...
  - ... financial development
  - ... market valuations (Tobin's Q, Buffet Indicator)

What we do

1. Introduce a new annual dataset on stock market capitalization for 17 countries over the last 150 years

2. Document the evolution of stock market size in advanced economies

3. Study the underlying drivers behind short, medium and long-term fluctuations

What we know so far

- Rajan and Zingales (2003): Great Reversal Hypothesis
  - Financial markets were large in 1913, small in 1980 and are again large today
  - Rationalized with political economy model
- Recent increase in real value of listed US firms
  - Lower corporate taxes (McGrattan and Prescott, 2005)
  - Higher market power (De Loecker and Eeckhout, 2017)
  - Low risk premia (Lettau et al., 2008)

What we find

1. Stock market size was stable until the 1980s, but skyrocketed thereafter $\Rightarrow$ the big bang
2. Fluctuations in market cap are largely driven by valuations, not issuances
3. Low risk premia are key in explaining the big bang
4. Market cap is a predictor of booms and busts in equity markets

Facts

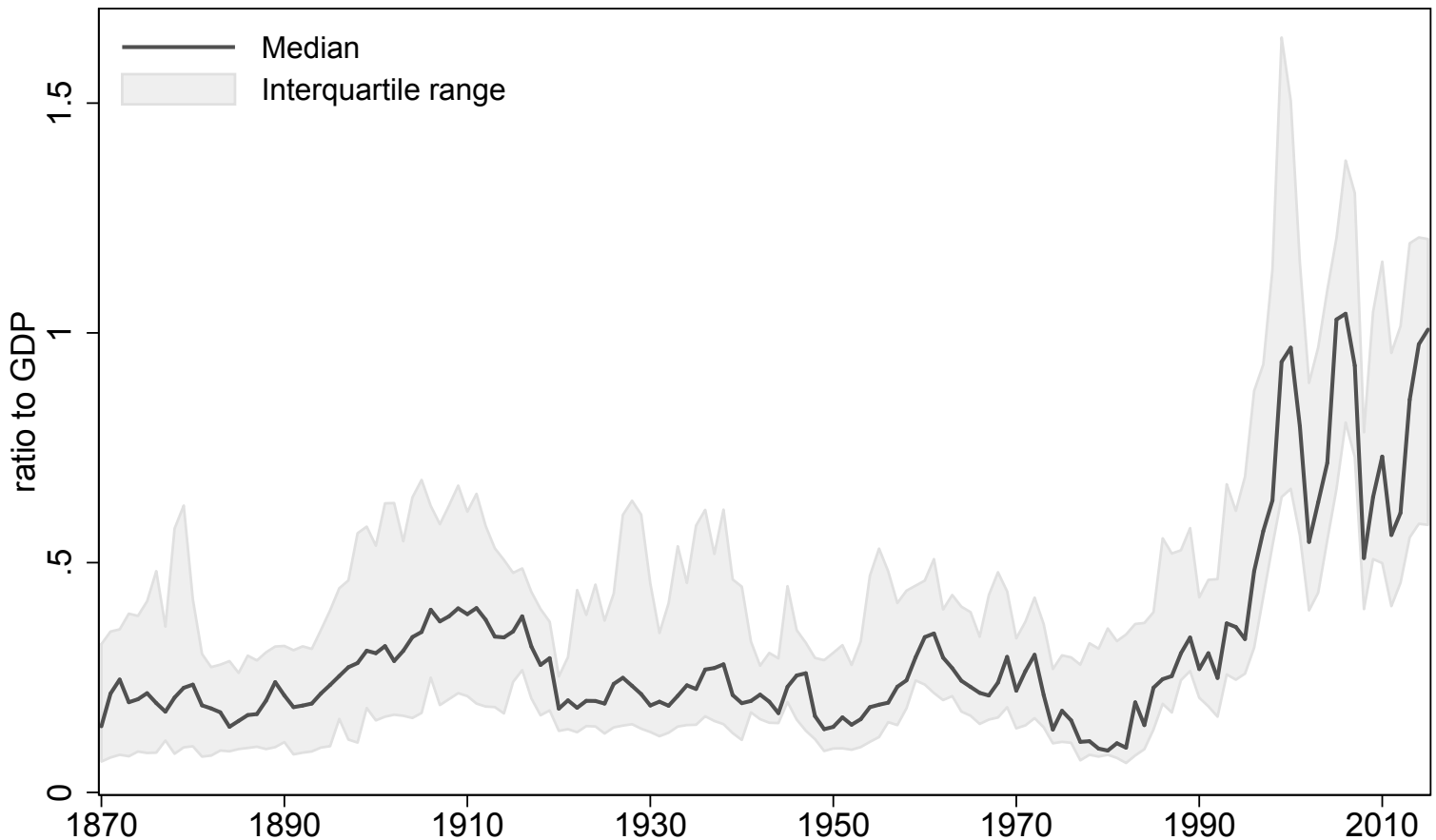
Data

1. First annual long-run cross-country dataset on stock market capitalization
2. Major data challenges
   - Domestic vs foreign shares
   - Stocks vs bonds
   - One vs many exchanges
3. Coverage
   - 17 countries: Australia, Belgium, Canada, Denmark, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom and the United States
   - 1870-2015

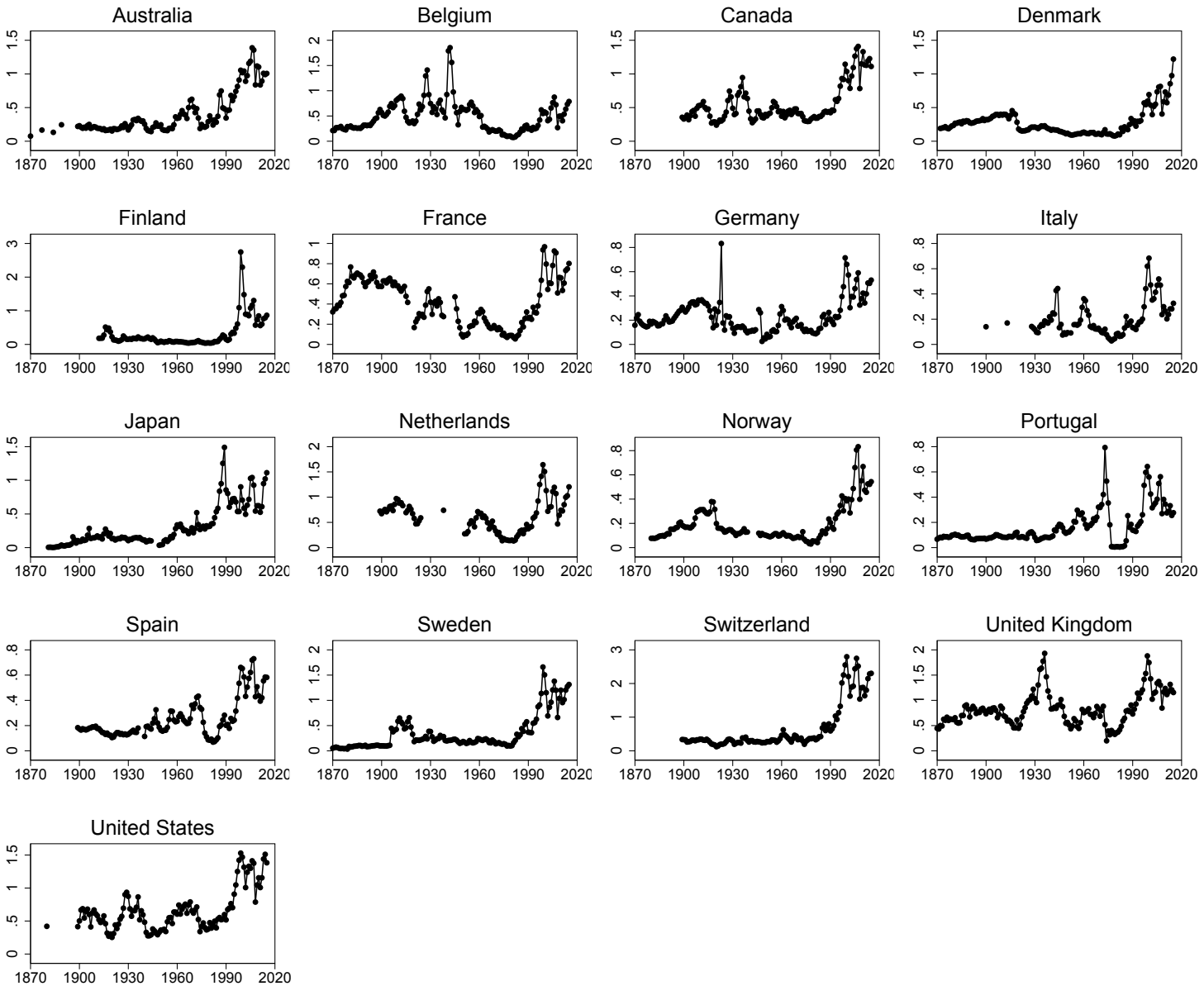
The big bang

Stock market capitalization in 17 advanced economies

- Size of the stock market stable between 1870 and 1985
- Historically unprecedented expansion over recent decades

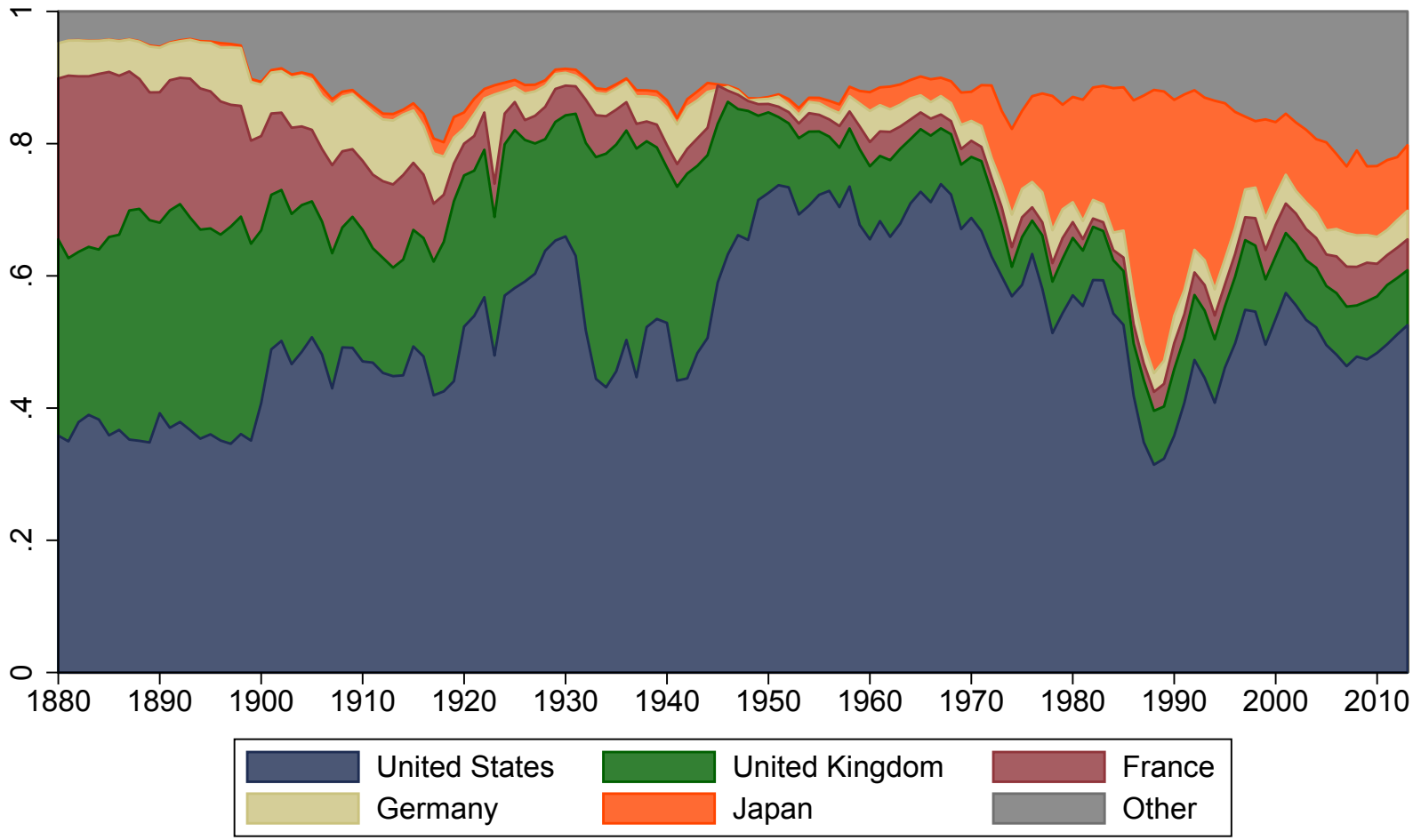


Stock market capitalization in individual countries



World market capitalization shares

- Roughly equal shares of the UK, France and the USA at the beginning of our sample
- Dominance of the USA until recent decades



Understanding the big bang

Decomposition of stock market growth

- Market capitalization in the economy:

$$MCAP_t = \sum_{i=1}^{N} P_{i,t} Q_{i,t}$$

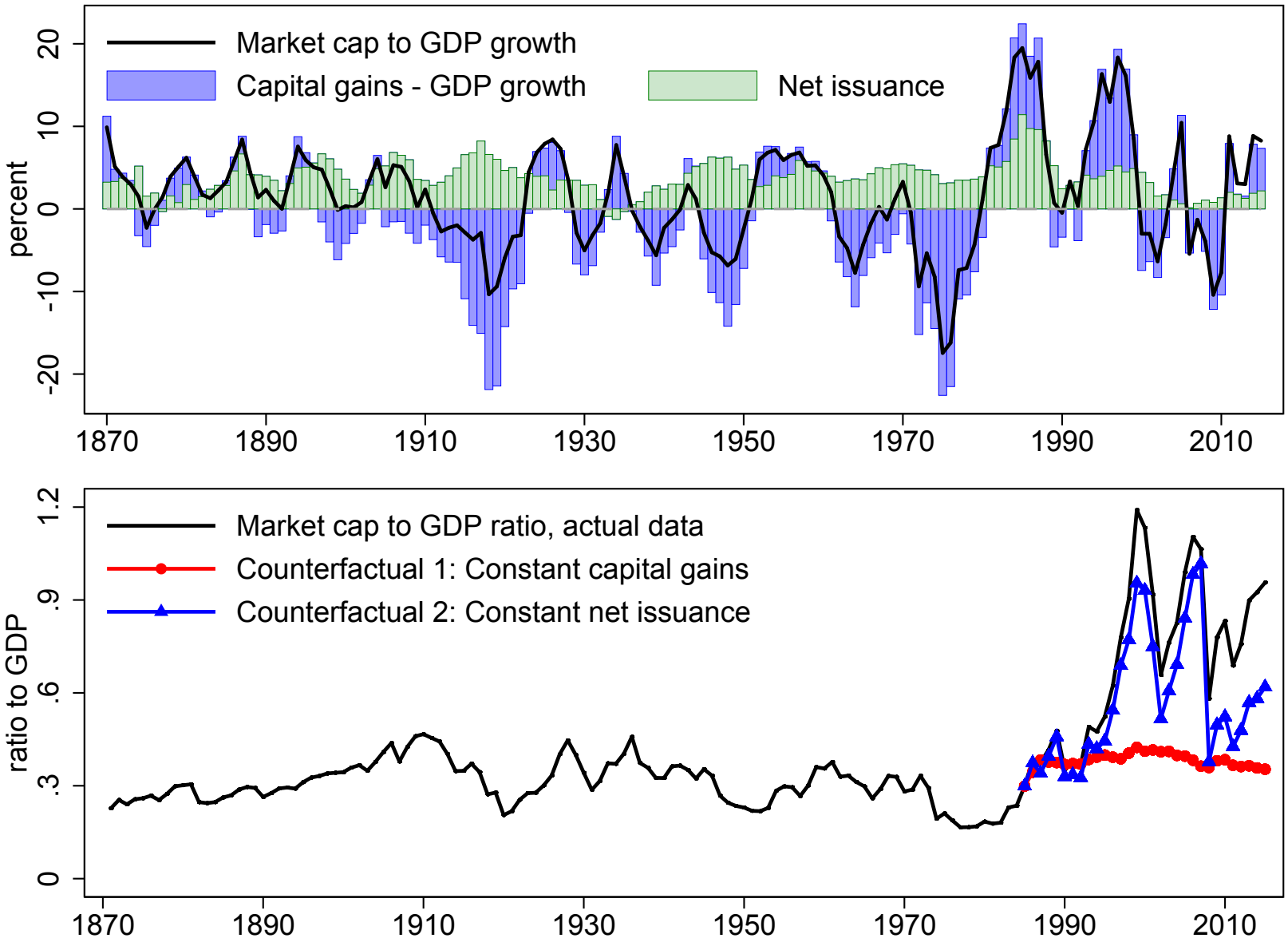
- Changes in market capitalization:

$$MCAP_t = MCAP_{t-1} + Issuances_t + CapGain_t$$

- Growth decomposition:

$$g_t^{MCAP/GDP} \approx iss_t + r_t^{eq} - g_t$$

Decomposition trends and counterfactual



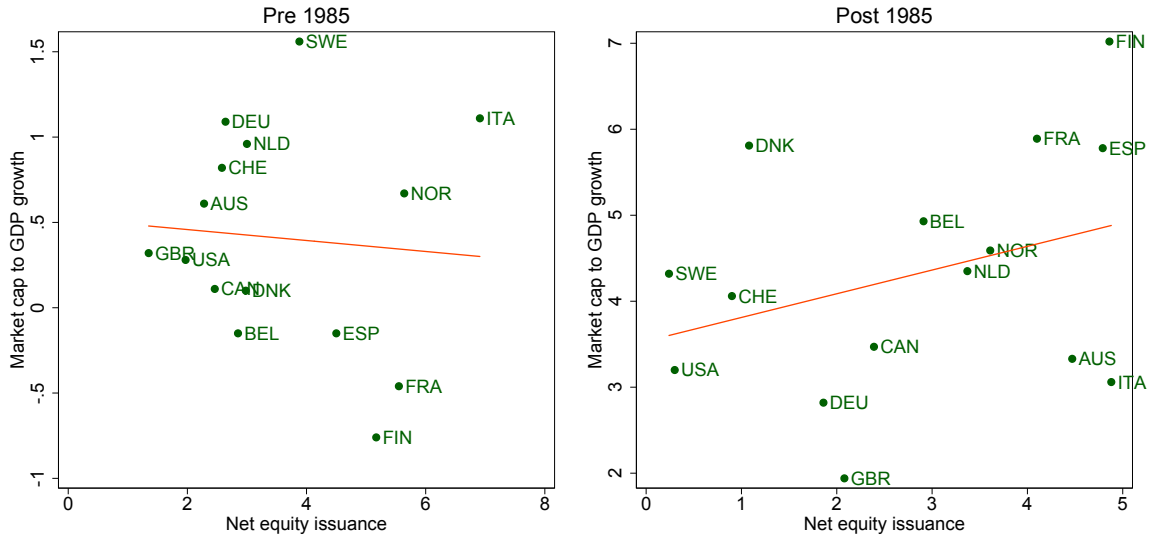
Market capitalization growth decomposition

- Issuances stable over the medium and long run
- Big bang driven by higher capital gains

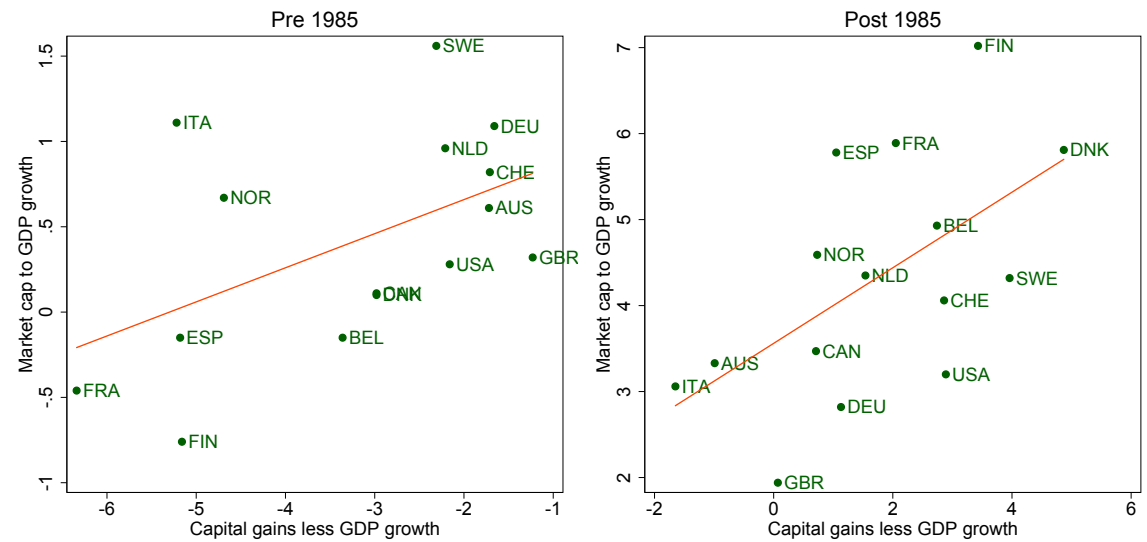
	(1) Full sample	(2) Pre 1914	(3) 1914–1985	(4) Post 1985
Market capitalization growth	1.55	2.44	-0.12	4.49
Decomposition of market capitalization growth into:				
Implied issuance to market cap	3.86	3.74	4.08	3.49
+ Real capital gain on equity	0.41	0.96	-1.15	3.41
− Real GDP growth	2.82	2.41	3.23	2.27
+ Approximation residual	0.10	0.15	0.19	-0.14
Observations	2076	448	1124	504

Cross-country evidence

(a) Market cap growth and equity issuance



(b) Market cap growth and capital gains



Drivers of the shift in stock valuations

We further decompose stock market valuations:

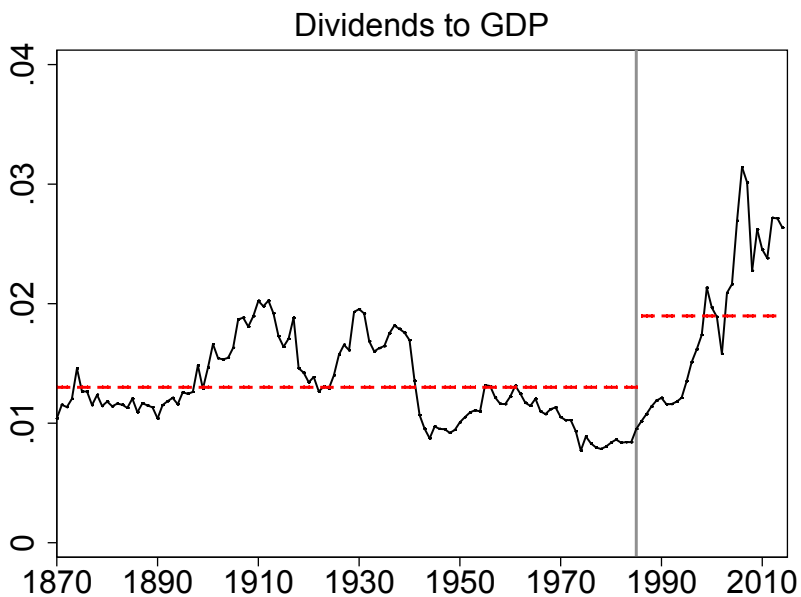
$$MCAP_t = \sum_{i=1}^{N} P_{i,t} Q_{i,t} = \sum_{i=1}^{N} Q_{i,t} \sum_{j=1}^{\infty} \frac{CF_{i,t+j}(1-\tau_{t+j})}{(1+r_t)^j}$$

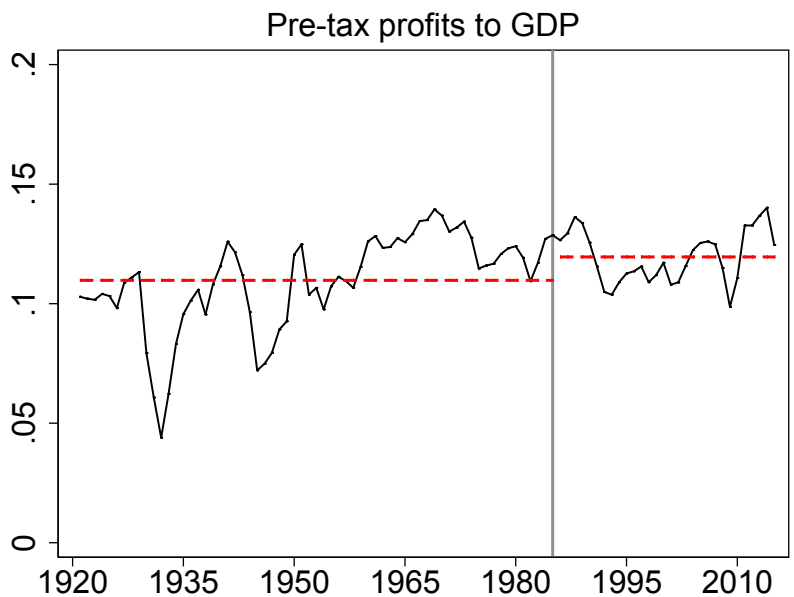
Potential candidates:

- Higher expected cashflows $CF_{i,t+j}$
- Lower taxes τ_{t+j}
- Lower discount rates r_t

Gross equity cashflows throughout history

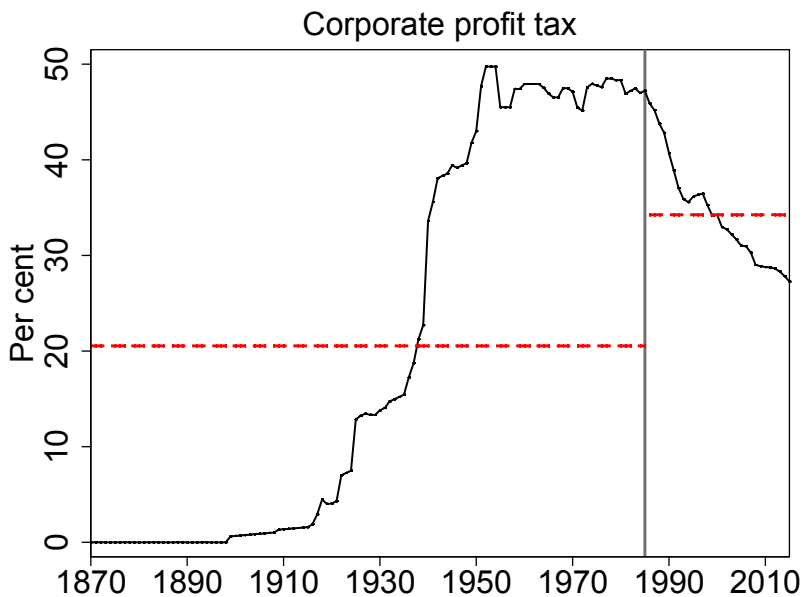
- Dividends to GDP rose by a factor of 2.5 between 1985 and 2015
- However, no corresponding increase in aggregate profitability

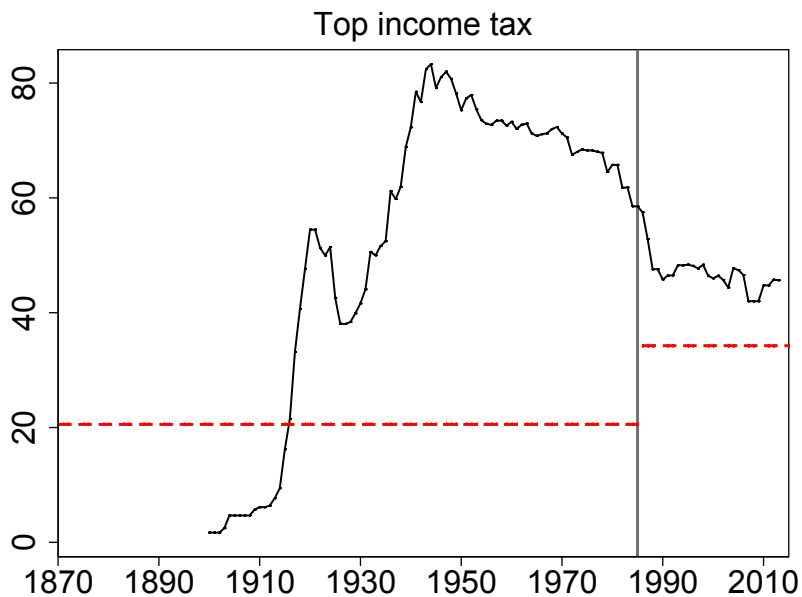




Taxation and the big bang

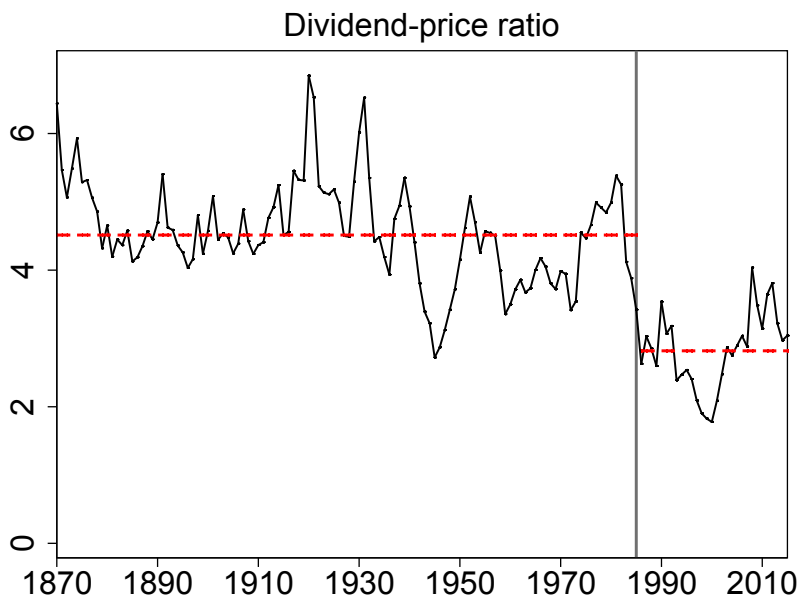
- Tax cuts roughly coincided with the big bang
- Stock market capitalization was low in the early sample period, even though taxes were close to zero
- Taxes and market cap are uncorrelated in simple explanatory regressions

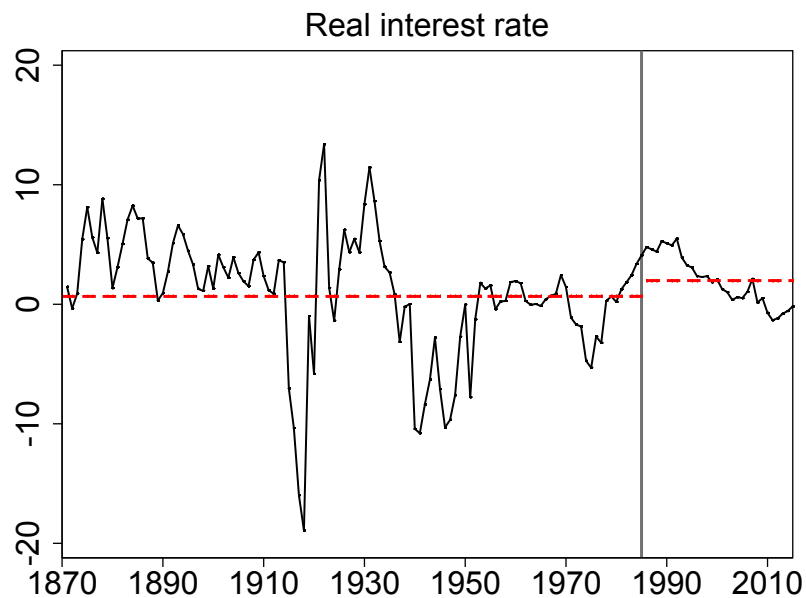




Discount rates and the big bang

- Discount rates fell sharply around the big bang
- Driven by risk premia, not safe rate





Taking stock of the underlying drivers

- Issuance stable over the long run
- No correlation with corporate tax rates
- Both risk premia and cashflows seem to matter

Next: What drives the cyclical variation in market capitalization?

Stock market capitalization and equity market risk

The Buffet Indicator

"the best single measure of where valuations stand at any given moment" (Buffett and Loomis, 2001)

Market Capitalization combines information on

- Prices (Campbell and Shiller, 1988)
- Quantities (Baker and Wurgler, 2000; Nelson, 1999)

What we do:

1. Predicting equity returns with stock market capitalization
2. Equity bubbles and crashes (tail risk)

Predicting equity returns with market capitalization

- High market cap predicts negative returns
- High market cap does not predict positive dividend growth

$$r_{t+1} = \beta_0 + \beta_1 MCAP_t/GDP_t + \beta_2 D_t/P_t + u_t$$
$$dg_{t+1} = \gamma_0 + \gamma_1 MCAP_t/GDP_t + \gamma_2 D_t/P_t + e_t$$

Panel 1: One-year ahead returns and dividend growth

	Real returns		Excess returns		Real dividend growth	
	(1)	(2)	(3)	(4)	(5)	(6)
$\log(MCAP_t/GDP_t)$	-0.037***	-0.029**	-0.032***	-0.027***	-0.008	-0.053***
	(0.007)	(0.010)	(0.005)	(0.008)	(0.009)	(0.015)
$\log(D_t/P_t)$		0.030		0.018		-0.161***
		(0.017)		(0.017)		(0.035)
R^2	0.015	0.019	0.011	0.012	0.000	0.065
Observations	1987	1987	1987	1987	1987	1987

Also works over 5 & 10 years, works better post 1985

Predicting equity returns with net issuances

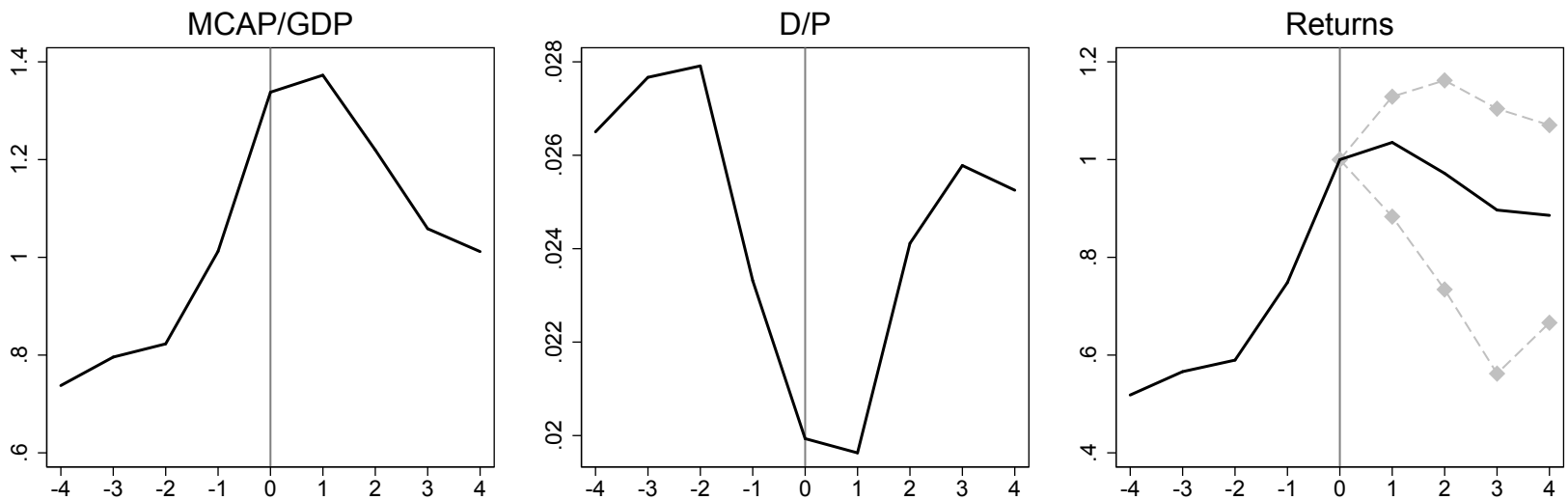
- Why does market capitalization do so well as an equity return predictor?
- It contains information on quantities as well as prices

Panel 1: One-year ahead returns and dividend growth

	Real returns		Excess returns		Real dividend growth	
	(1)	(2)	(3)	(4)	(5)	(6)
Issuance/GDP	-0.860**	-0.786*	-0.616**	-0.545*	-0.215	-0.413
	(0.398)	(0.384)	(0.288)	(0.286)	(0.337)	(0.381)
$\log(D_t/P_t)$		0.046***		0.043***		-0.121***
		(0.010)		(0.012)		(0.029)
R^2	0.011	0.021	0.006	0.015	0.000	0.048
Observations	1907	1907	1907	1907	1907	1907

Market capitalization run-ups look a lot like equity bubbles

- Run-ups in market cap are followed by low valuations, low returns and high tail risk
- High or rising market cap predicts rising equity market crash risk



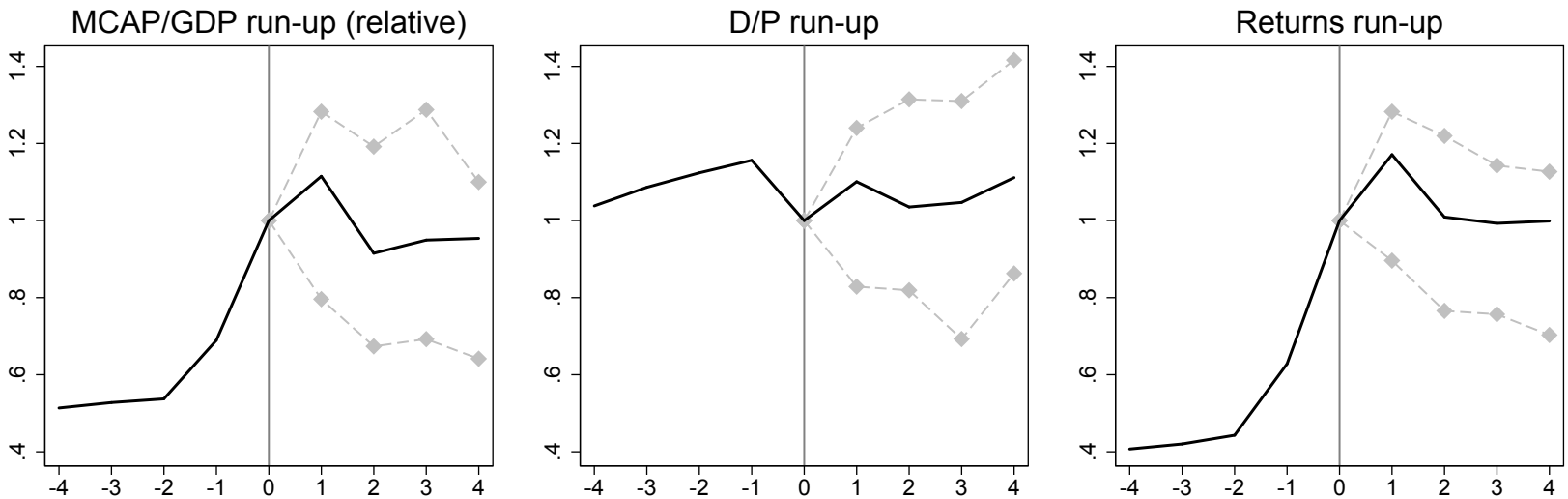
Run-up: 35% of GDP or higher increase in market cap over 2 years, and 17.5% of GDP or higher increase over 5 years ▸ Alternative run-up definitions

Conclusion

- The Big Bang: Structural increase of stock market capitalization in the 1980s and 1990s
- We analyse the drivers of structural and cyclical variation in market capitalization
  - Fluctuations largely driven by valuations
  - Limited role for issuances and taxes
  - Evidence for Buffet Indicator: Market cap predicts negative returns and market crashes

Stock returns around run-ups in alternative valuation measures

back



Predicting Equity Market Crashes: alternative specifications

back

	(1) Pre 1945	(2) Post 1945	(3) Post 1985	(4) War Obs.	(5) Credit Growth
$\log(MCAP_{t-1}/GDP_{t-1})$	3.04***	0.69***	1.55***	0.74***	0.79***
	(0.86)	(0.14)	(0.35)	(0.12)	(0.11)
$\Delta_3 \log(MCAP_{t-1}/GDP_{t-1})$	1.42**	0.50**	1.25***	0.69***	0.63***
	(0.60)	(0.24)	(0.32)	(0.26)	(0.24)
Country fixed effects	✓	✓	✓	✓	✓
ROC	0.80	0.70	0.79	0.70	0.75
Number of Crashes	27	98	53	145	119
Observations	583	1161	527	2043	1888

	(1) Decade	(2) Large Crashes	(3) 1-year Crashes	(4) 3-year Crashes	(5) MCAP Crashes
$\log(MCAP_{t-1}/GDP_{t-1})$	0.65***	1.05***	0.75***	0.92***	0.55***
	(0.24)	(0.22)	(0.14)	(0.12)	(0.11)
$\Delta_3 \log(MCAP_{t-1}/GDP_{t-1})$	0.87***	1.36**	0.01	1.27***	0.98***
	(0.29)	(0.59)	(0.21)	(0.40)	(0.29)
Country fixed effects	✓	✓	✓	✓	✓
ROC	0.78	0.80	0.69	0.76	0.70
Number of Crashes	125	30	94	106	147
Observations	2003	1730	1857	1857	1857

Making Capital Efficient

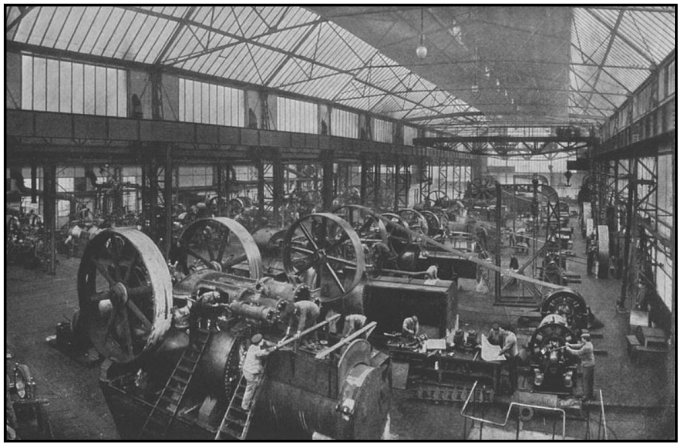
Non-life insurance as institutional investor, underlying mechanisms and the experience of the Zurich Insurance Company 1872-1950

eabh Conference: The Rise of Institutional Investors, London October 26, 2018

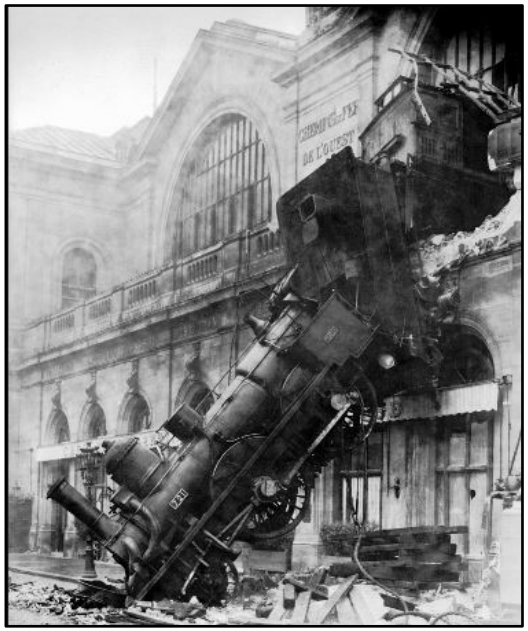
Christofer Stadlin, Corporate Archives, **Zurich Insurance Group**

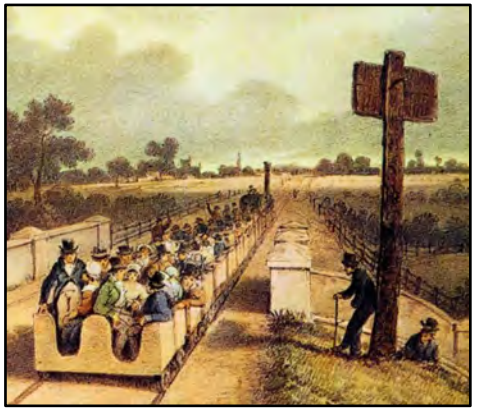
The second industrial revolution and its risks

Perception changes: Destiny turns into responsibility & liability



Factory floors





Railways

Responsibility and the Bourgeois Middle Classes

- First accident insurer: **Railway Passengers Assurance Co.** UK 1849
  - Personal responsibility to take precautions against material consequences of accidents
  - Railway-Travel, Travel & Personal Accident Insurance

Liability and the Social Question

- German Imperial Liability Law (Reichshaftpflichtgesetz) 1871 makes industrialists liable for material consequences towards their workforce and third parties
  - Liability becomes a financial risk
  - Liability insurance, collective accident insurance – workmen's compensation

Insure and set capital free

Risk transfer, risk pooling

- Insurance stock companies allow total risk transfer for fixed premiums
  - Risk becomes budgetable
  - Keeping of excess capital to cover risks not necessary
  - Lower excess capital more free capital

Premium-receipt 1903

Policy for Lifelong Railway & Steamship Accident Insurance 1912

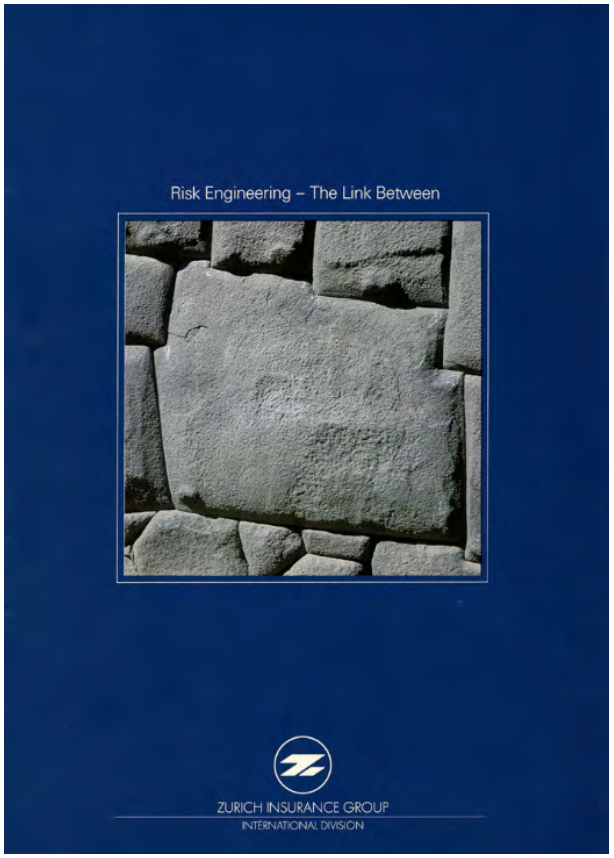
Policy for Personal Accident Insurance 1881

- Risk pooling
  - Premiums adjusted to the effective administrative and claim costs
  - The larger the risk group(s)
  - The broader the spread of administrative and claims costs (solidarity)
  - The lower the premiums

Insure and set capital free

Safety

- Incentives to take safety measures
  - Loss prevention
  - Fewer claims
    - Insurer => higher profits
    - Insured => lower premiums & less suffering

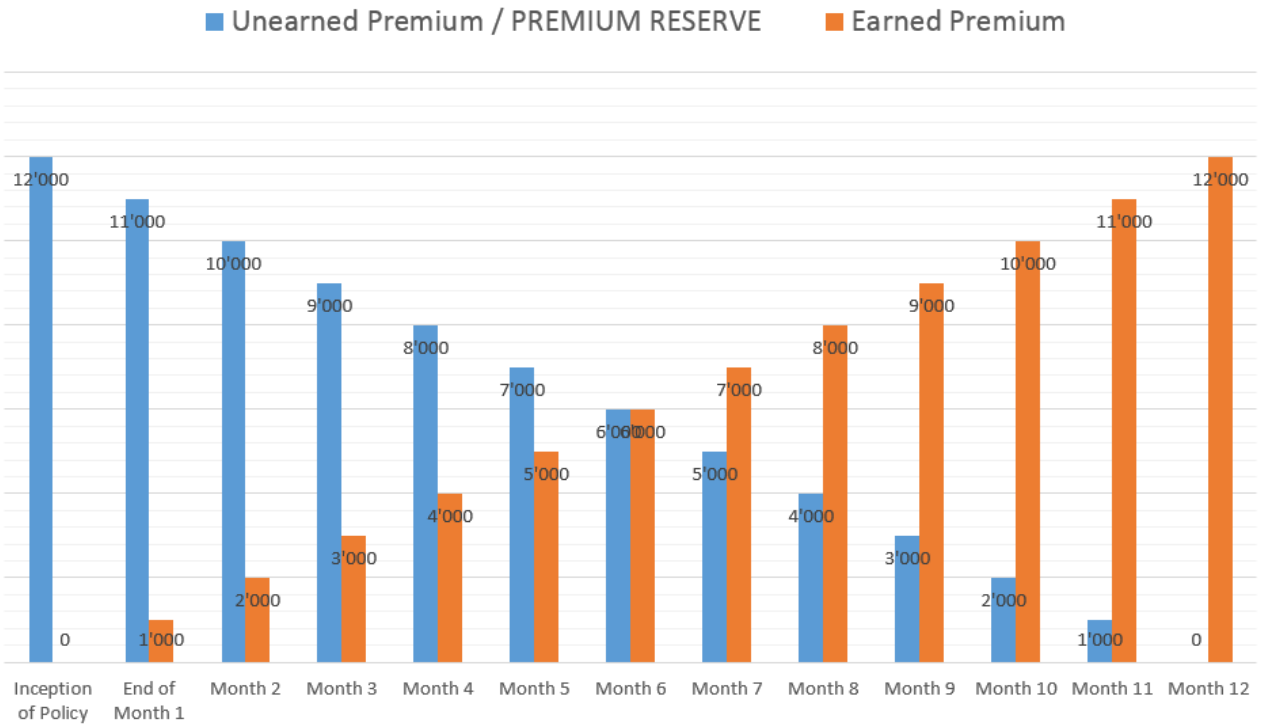


- Corrective mechanism of fixed premium system:
  - Policies can be cancelled after each claim / loss event
  - Premiums adapted to loss experience at individual policy level
    - High claim costs => higher premiums
    - Low claim costs => lower premiums

Capitalise risks and claims & collect the capital

Funded scheme reserving

- Funded scheme approach: insured risks fully capitalised, claims at best guess
- Premium reserves (for unexpired risks):
  - Premiums paid before or at inception of a policy
  - Example: Workers Accident Insurance Policy CHF 12’000 Premium / 12 Months



- Claims reserves for not yet regulated/paid claims at best guess and experience

Non-Life insurance as Institutional Investor

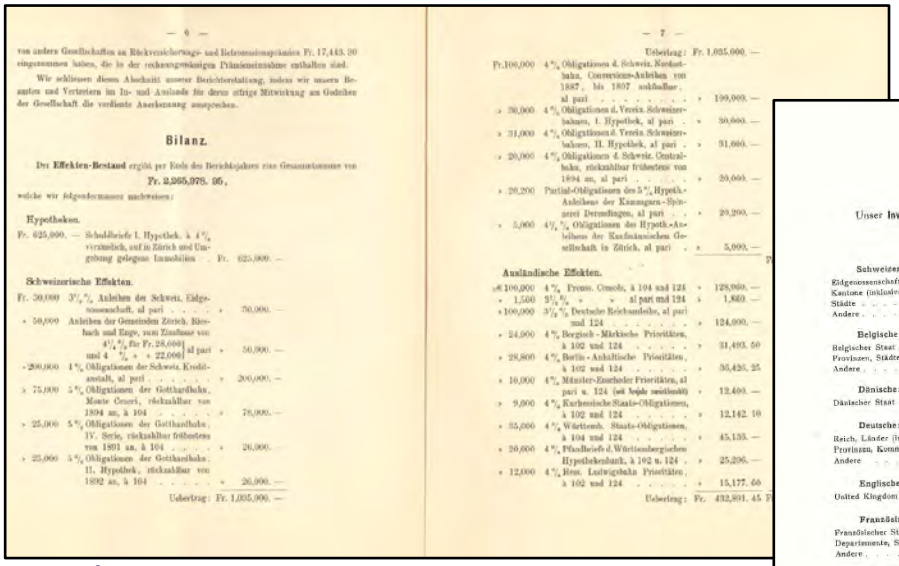
- All capital booked for the reserves on the liability side of the balance sheet to be invested on capital markets
- Invested assets represent liabilities towards customers and third parties

Allegorical figure group representing accident insurance with the horn of plenty providing material relieve (in the artists workshop)

Figure group on top of Zurich's headquarters

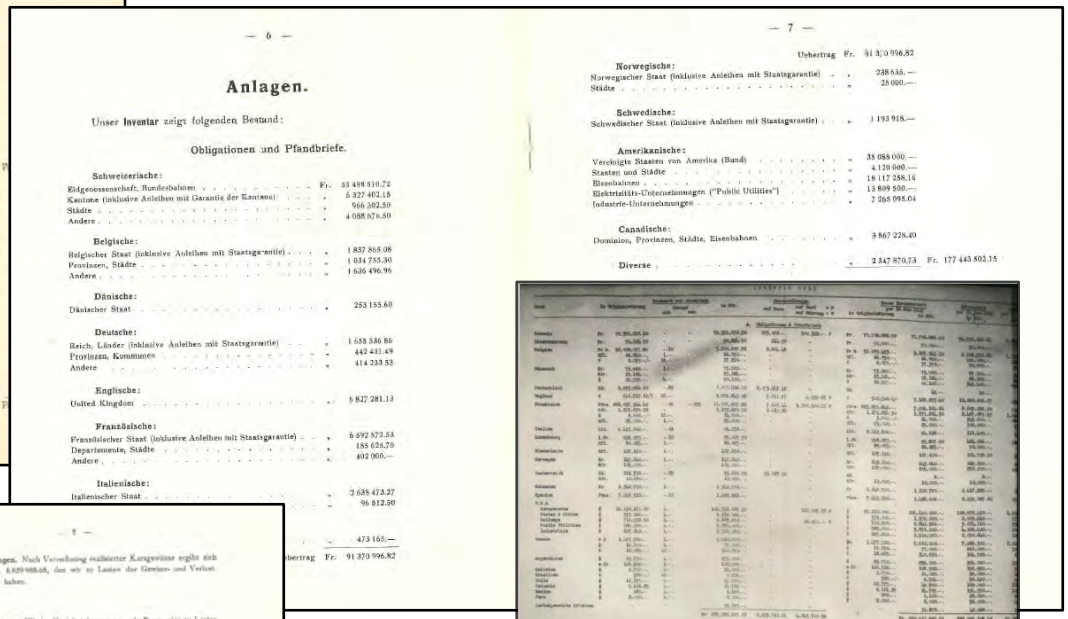
Zurich as Institutional Investor 1873-1950

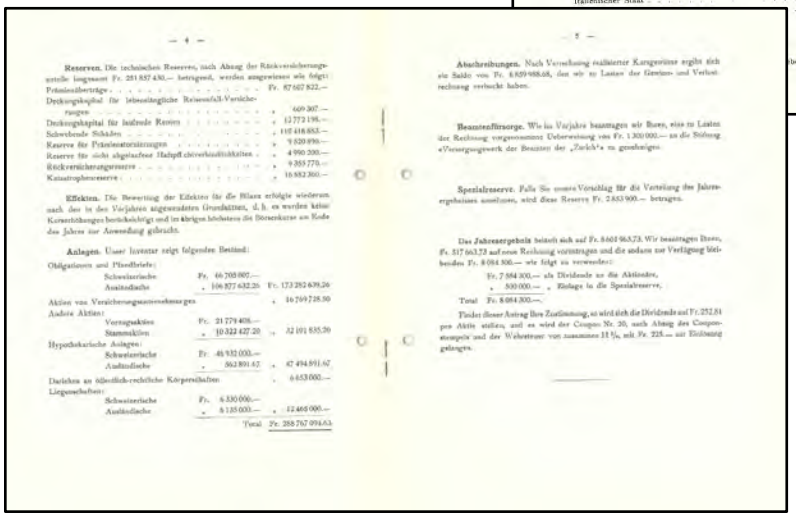
Sources: Annual Reports & Internal Inventories



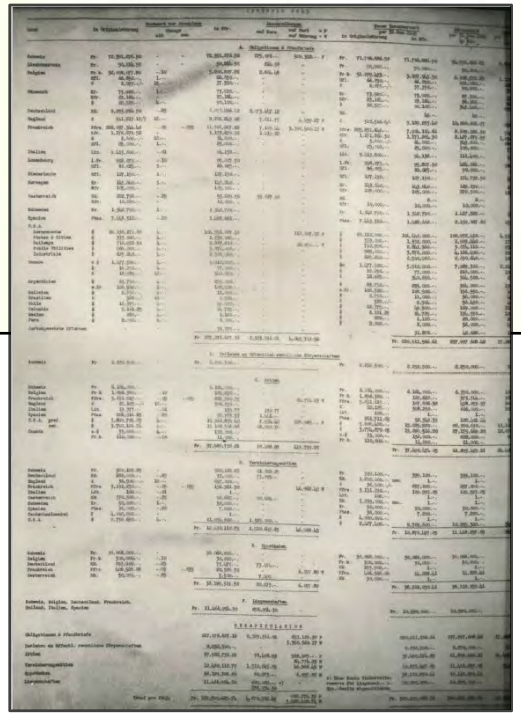
Annual Report 1887

Annual Report 1940





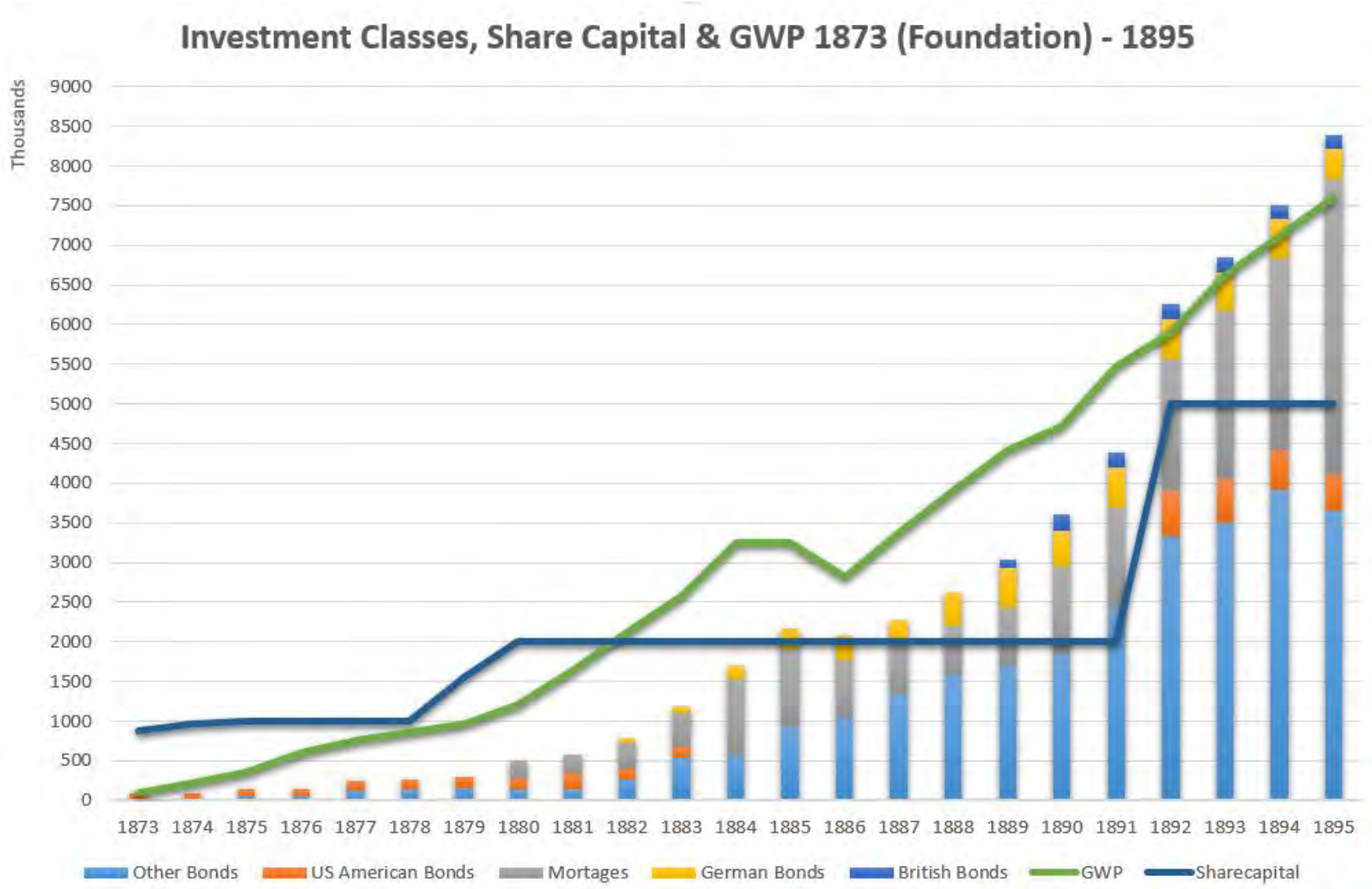
Annual Report 1941



Internal Inventory 1945

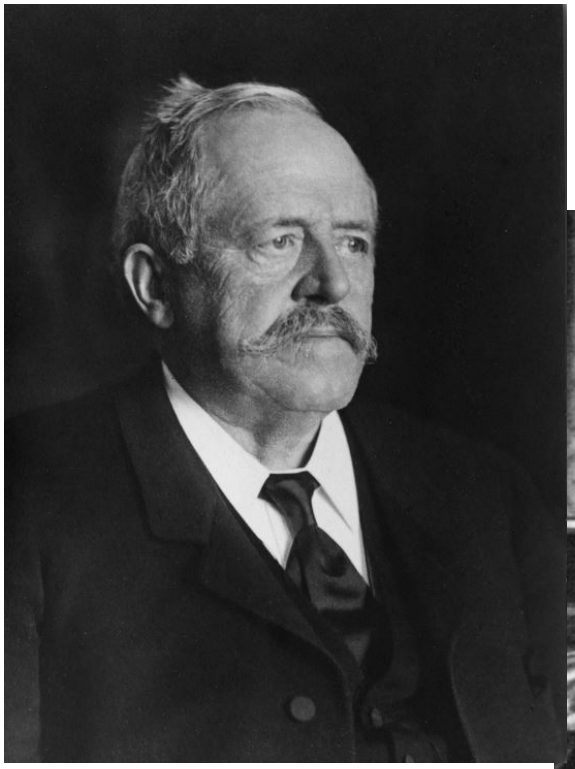
Zurich as Institutional Investor 1873-1950

Foundation, Uses of a Stock Company, Early Investments



Zurich as Institutional Investor 1873-1950

Investment Know-How & Governance



Heinrich E. Streuli
(* 1839 † 1915)
Board member 1872 – 1915
Vice-Chairman 1883 – 1887,
1899 – 1901
Chairman 1902 - 1915

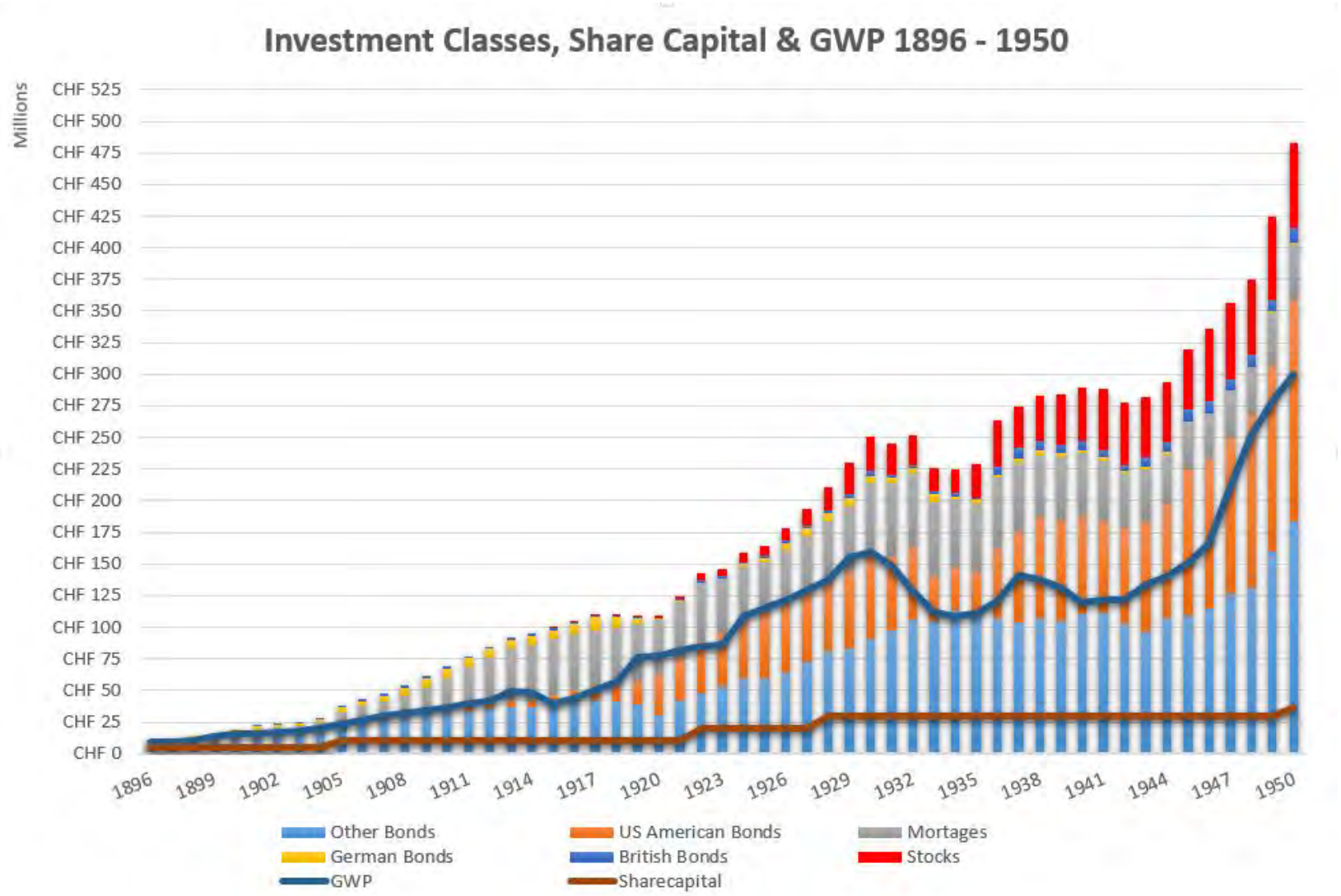
Streuli in NYC 1858-1861

Carl Abegg-Arter
(* 1836 † 1912)
Board member 1872 – 1912
Vice-Chairman 1880 – 1883,
1901- 1912

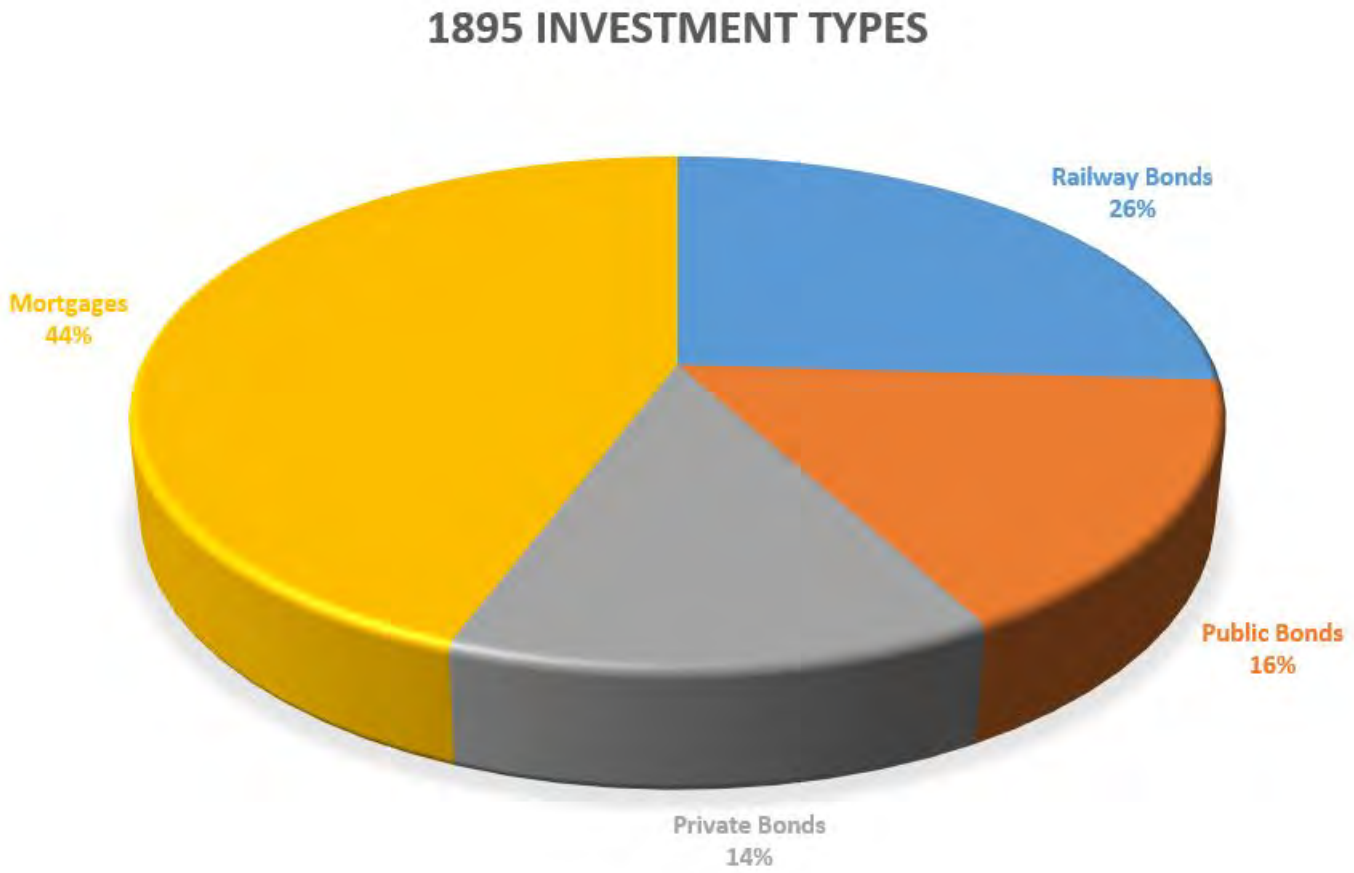
Credit Suisse
Board member 1868-1912
Chairman 1883-1911

Zurich as Institutional Investor 1873-1950

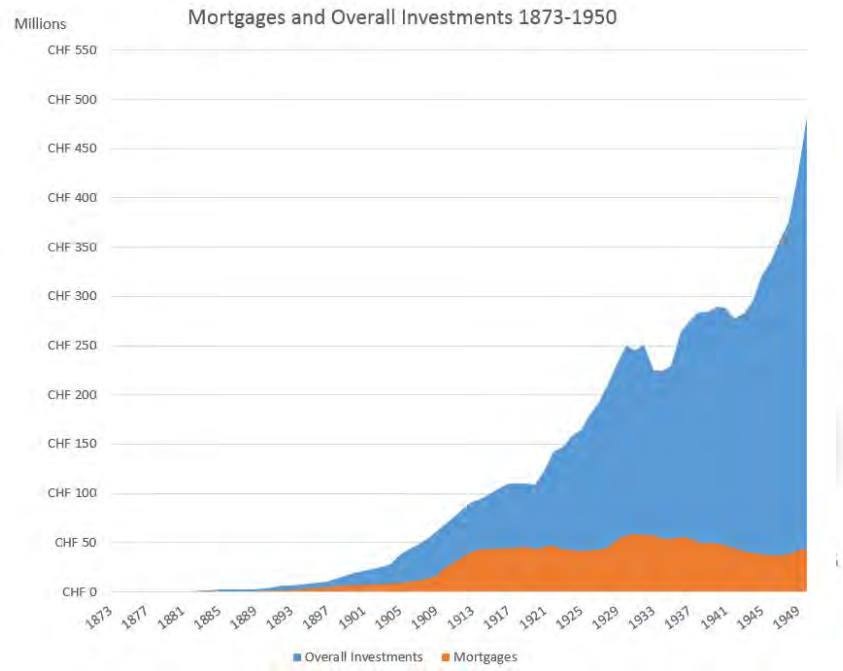
The Big Picture



Investment Types / Classes



Mortgages



Risk of Railway Bonds

Bad experience with Gotthardbahn early on

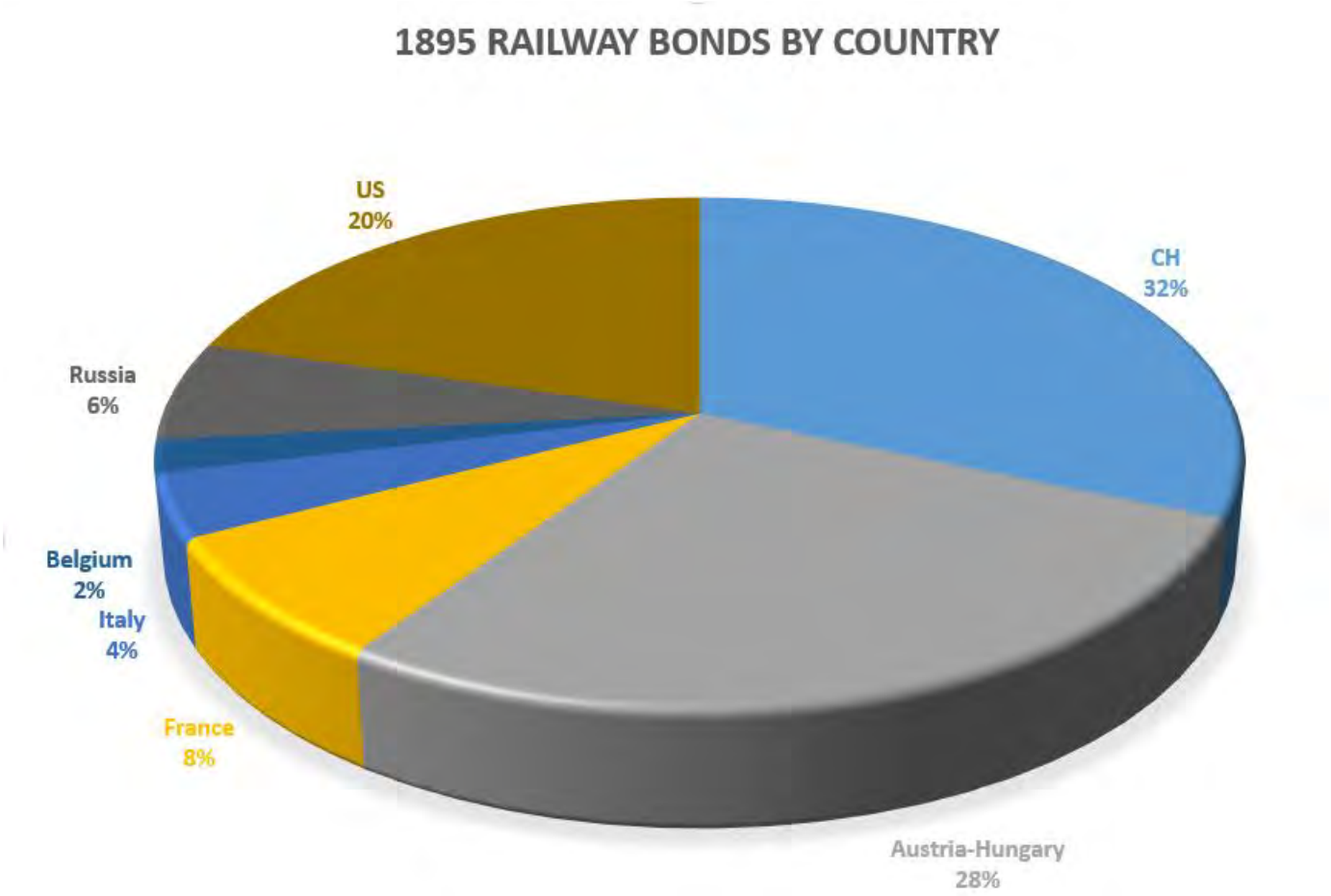
Annual Report 1875

Activa.

Ad 3. Der »Effektenbestand« umfasst folgende Werthe:

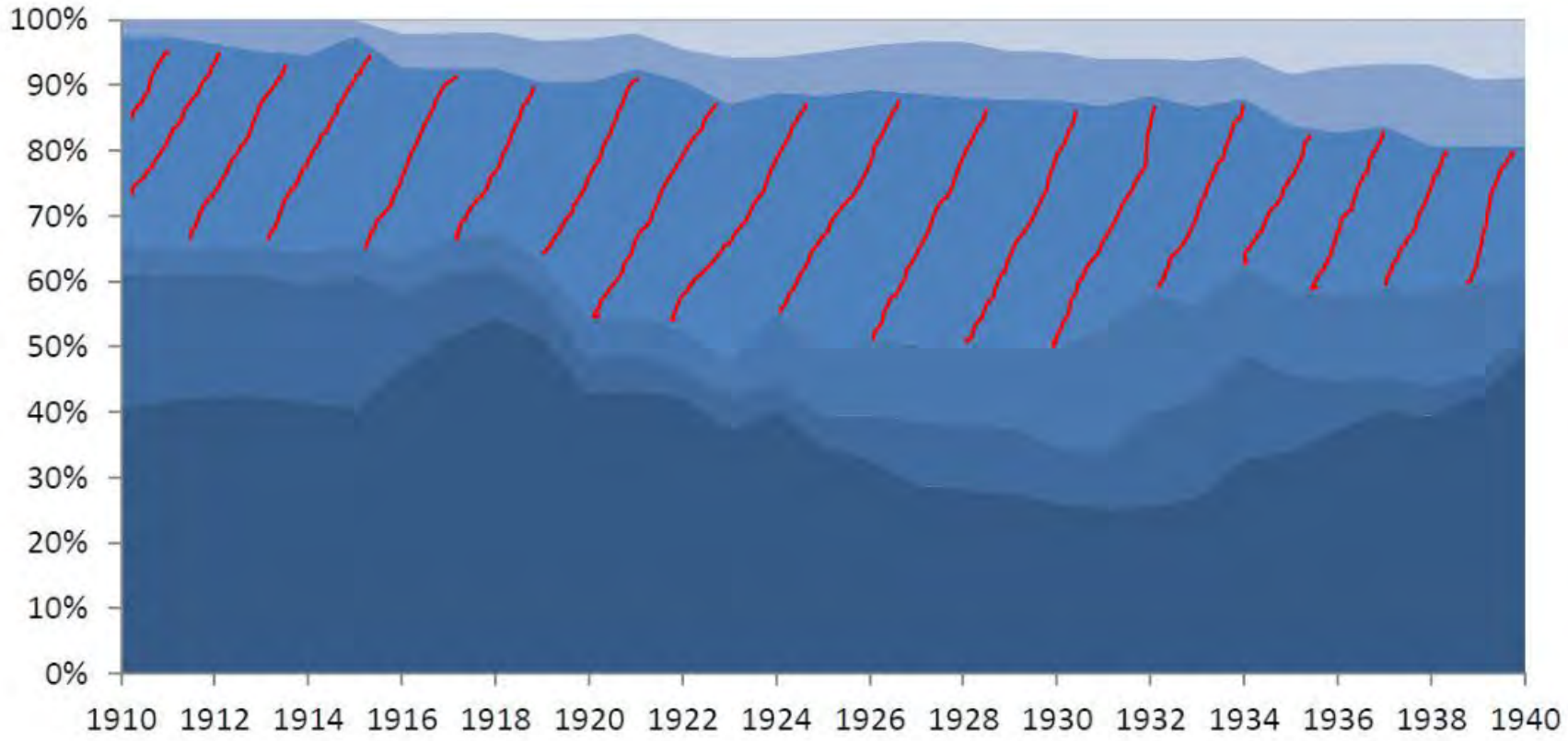
Fr. 100,000. —	5 % Gotthardbahn-Obligationen à 97 3/8			Fr. 97,375. —
$ 20,000. —	Equitable Trust Company Bonds, bestehend aus:			
$ 5,000	Elmes	dafür haften in 1. Hypothek .	$ 10,800	
$ 5,000	Pitts	» .	$ 10,700	
$ 5,000	Howard	» .	$ 10,800	
$ 5,000	Hamlin	» .	$ 10,000	
			$ 42,300	
$ 20,000	pari à Fr. 4. 50			Fr. 90,000. —
				Fr. 187,375. —
Reduktion der Gotthardbahn-Obligationen auf den Kurs von 55 %.				
Abschreibung				Fr. 42,375. —
				Fr. 145,000. —

Railway Bonds



Railway Bonds 1910-1940

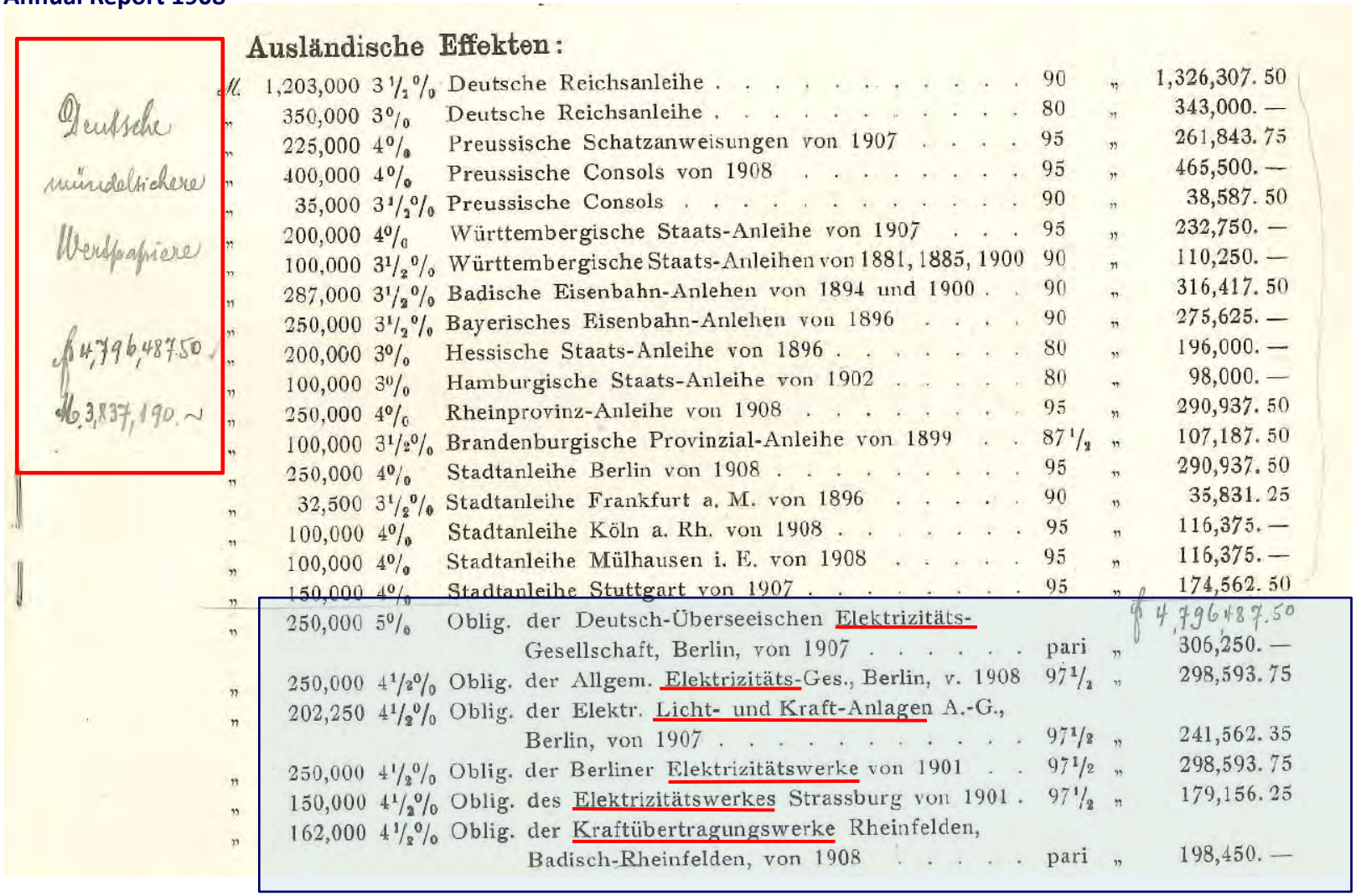
Securities portfolio 1910-1940



Public Bonds & Public-Private Utilities

“Mündelsicher” (State guaranteed gilt-edged securities)

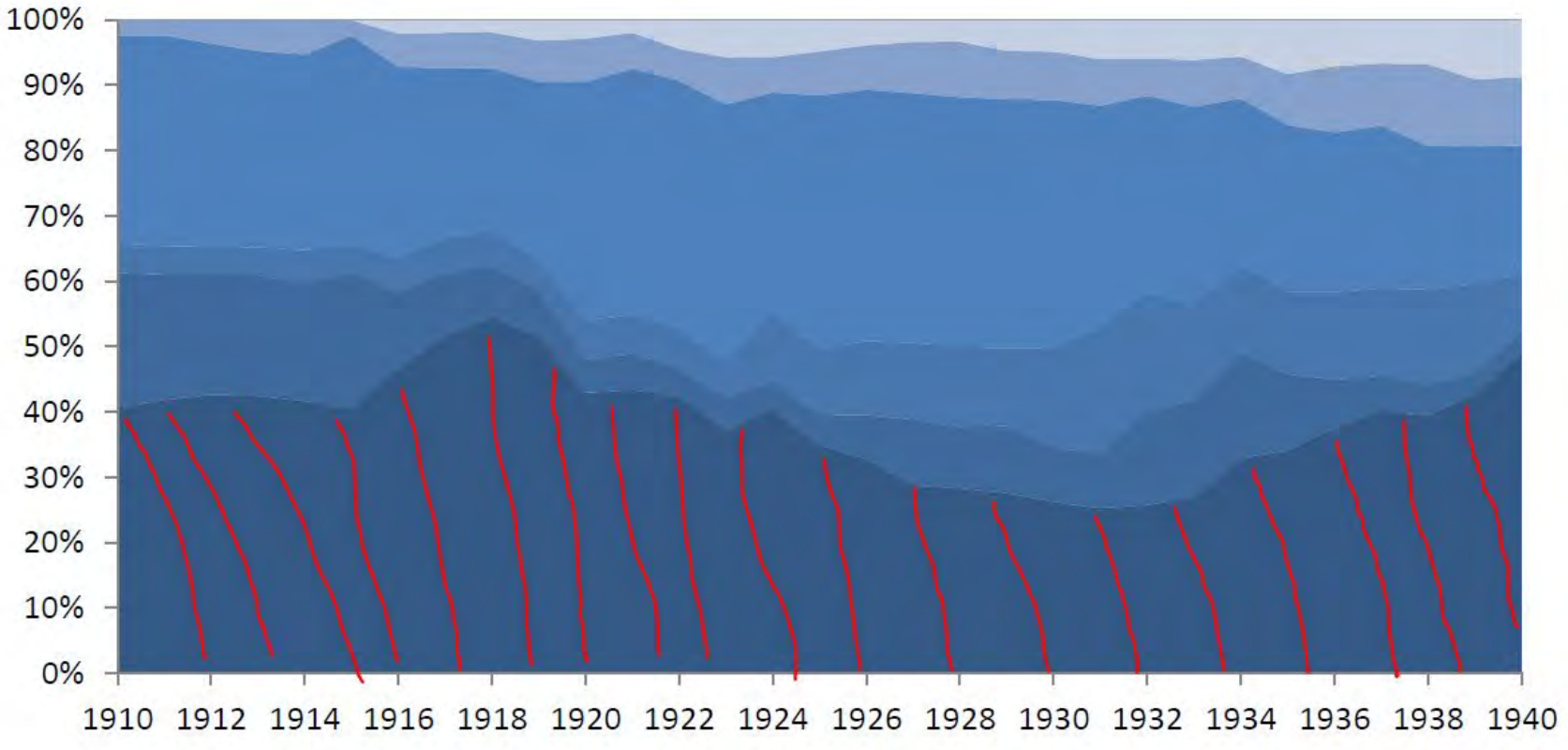
Annual Report 1908

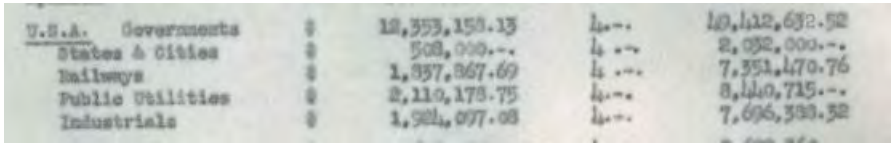


Ausländische Effekten:

M.	1,203,000	3½%	Deutsche Reichsanleihe	90	1,326,307. 50
„	350,000	3%	Deutsche Reichsanleihe	80	343,000. —
„	225,000	4%	Preussische Schatzanweisungen von 1907	95	261,843. 75
„	400,000	4%	Preussische Consols von 1908	95	465,500. —
„	35,000	3½%	Preussische Consols	90	38,587. 50
„	200,000	4%	Württembergische Staats-Anleihe von 1907	95	232,750. —
„	100,000	3½%	Württembergische Staats-Anleihen von 1881, 1885, 1900	90	110,250. —
„	287,000	3½%	Badische Eisenbahn-Anlehen von 1894 und 1900	90	316,417. 50
„	250,000	3½%	Bayerisches Eisenbahn-Anlehen von 1896	90	275,625. —
„	200,000	3%	Hessische Staats-Anleihe von 1896	80	196,000. —
„	100,000	3%	Hamburgische Staats-Anleihe von 1902	80	98,000. —
„	250,000	4%	Rheinprovinz-Anleihe von 1908	95	290,937. 50
„	100,000	3½%	Brandenburgische Provinzial-Anleihe von 1899	87½	107,187. 50
„	250,000	4%	Stadtanleihe Berlin von 1908	95	290,937. 50
„	32,500	3½%	Stadtanleihe Frankfurt a. M. von 1896	90	35,831. 25
„	100,000	4%	Stadtanleihe Köln a. Rh. von 1908	95	116,375. —
„	100,000	4%	Stadtanleihe Mülhausen i. E. von 1908	95	116,375. —
„	150,000	4%	Stadtanleihe Stuttgart von 1907	95	174,562. 50
„	250,000	5%	Oblig. der Deutsch-Überseeischen Elektrizitäts-Gesellschaft, Berlin, von 1907	pari	306,250. —
„	250,000	4½%	Oblig. der Allgem. Elektrizitäts-Ges., Berlin, v. 1908	97½	298,593. 75
„	202,250	4½%	Oblig. der Elektr. Licht- und Kraft-Anlagen A.-G., Berlin, von 1907	97½	241,562. 35
„	250,000	4½%	Oblig. der Berliner Elektrizitätswerke von 1901	97½	298,593. 75
„	150,000	4½%	Oblig. des Elektrizitätswerkes Strassburg von 1901	97½	179,156. 25
„	162,000	4½%	Oblig. der Kraftübertragungswerke Rheinfelden, Badisch-Rheinfelden, von 1908	pari	198,450. —

Public/Government Bonds (securities portfolio) 1910-40

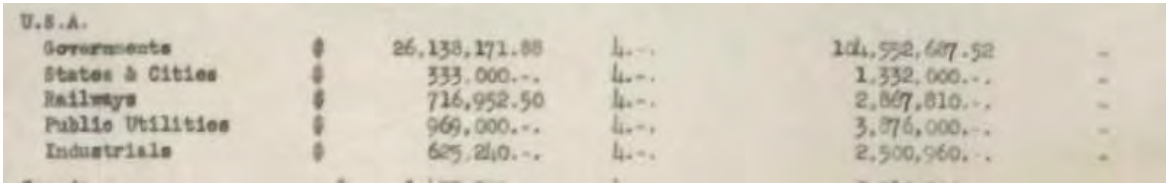




U.S.A. Governments	$	12,353,158.13	L.-.	10,412,632.52
States & Cities	$	508,000.-.	L.-.	2,052,000.-.
Railways	$	1,337,867.69	L.-.	7,351,470.76
Public Utilities	$	2,110,178.75	L.-.	8,140,715.-.
Industrials	$	1,324,977.08	L.-.	7,696,388.32

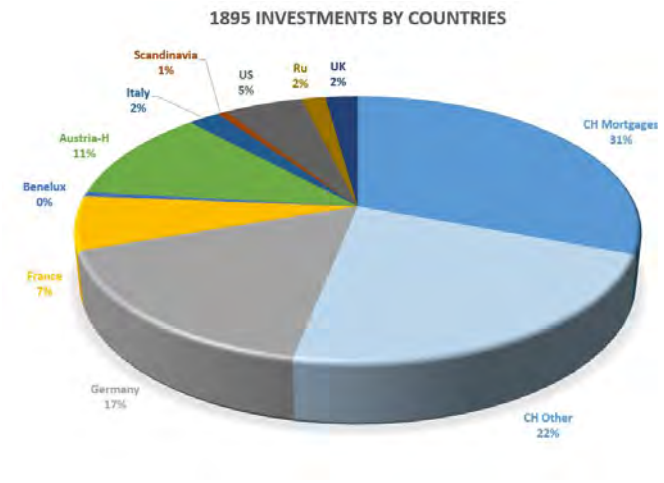
Internal Inventory 1942
US Government CHF 40’412’632

Internal Inventory 1945
US Government CHF 104’552’687

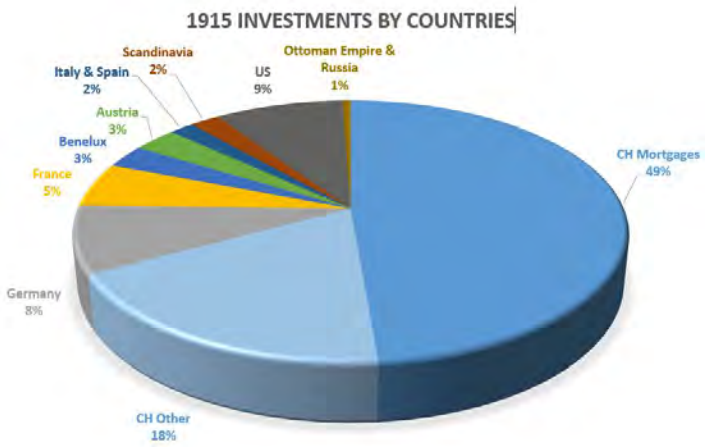


U.S.A.				
Governments	$	26,138,171.88	L.-.	104,552,687.52
States & Cities	$	333,000.-.	L.-.	1,332,000.-.
Railways	$	716,952.50	L.-.	2,867,810.-.
Public Utilities	$	969,000.-.	L.-.	3,876,000.-.
Industrials	$	625,240.-.	L.-.	2,500,960.-.

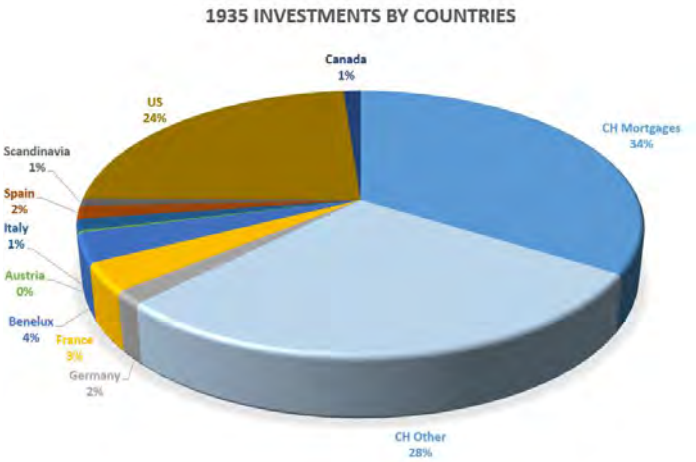
Investments by Countries: Safe havens 1895-1945



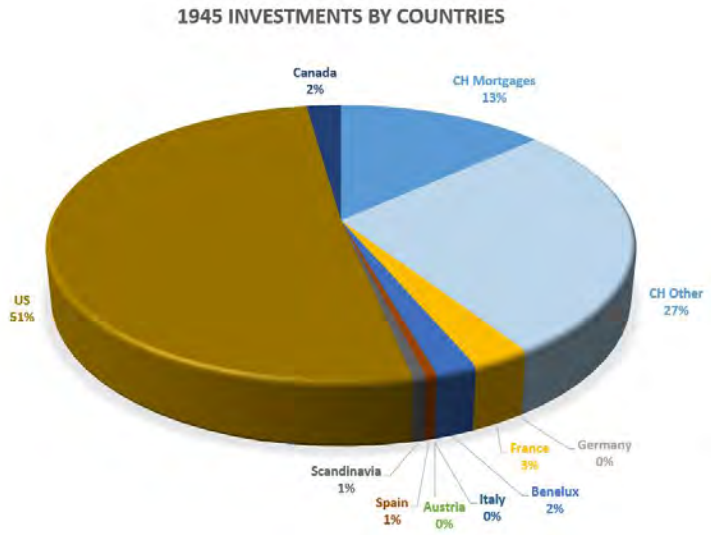
1895 CH 53%



1915 CH 67%



1935 CH 62%



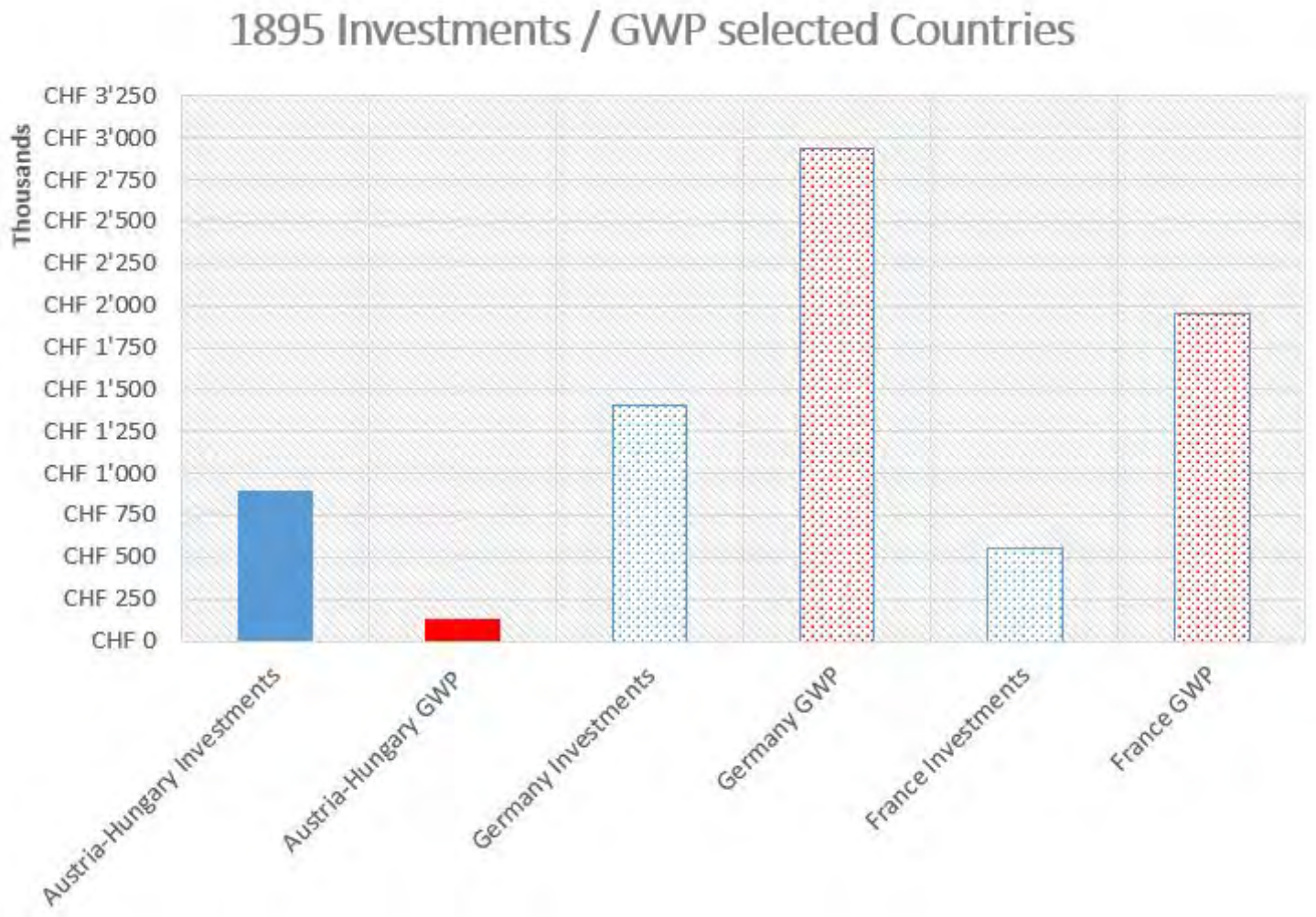
1945 CH 40% US 51%

Thank you

Appendix

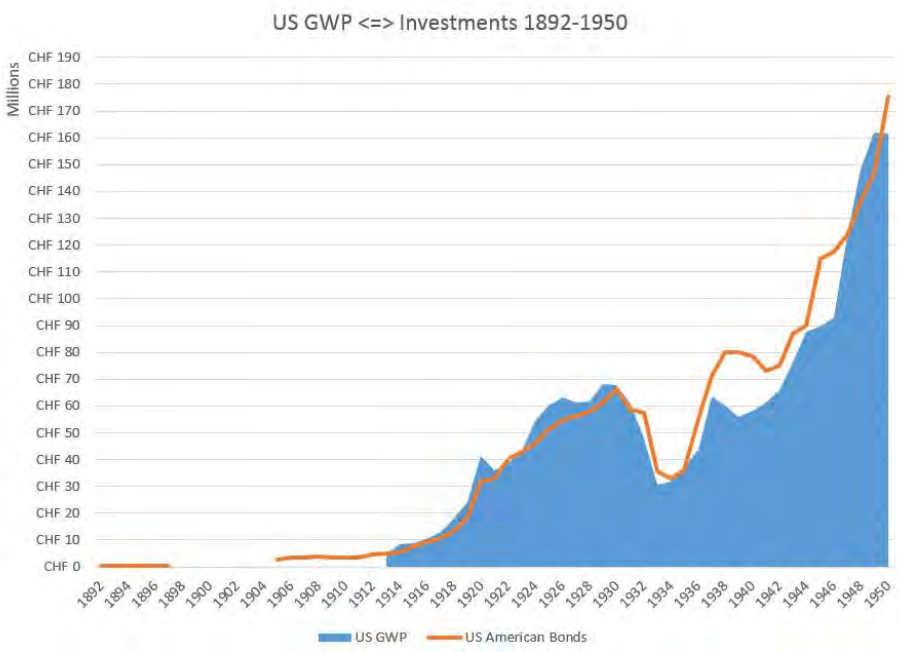
Investments as indicators for economic history

Austra-Hungarian Empire an economic powerhouse at the close of 19th century

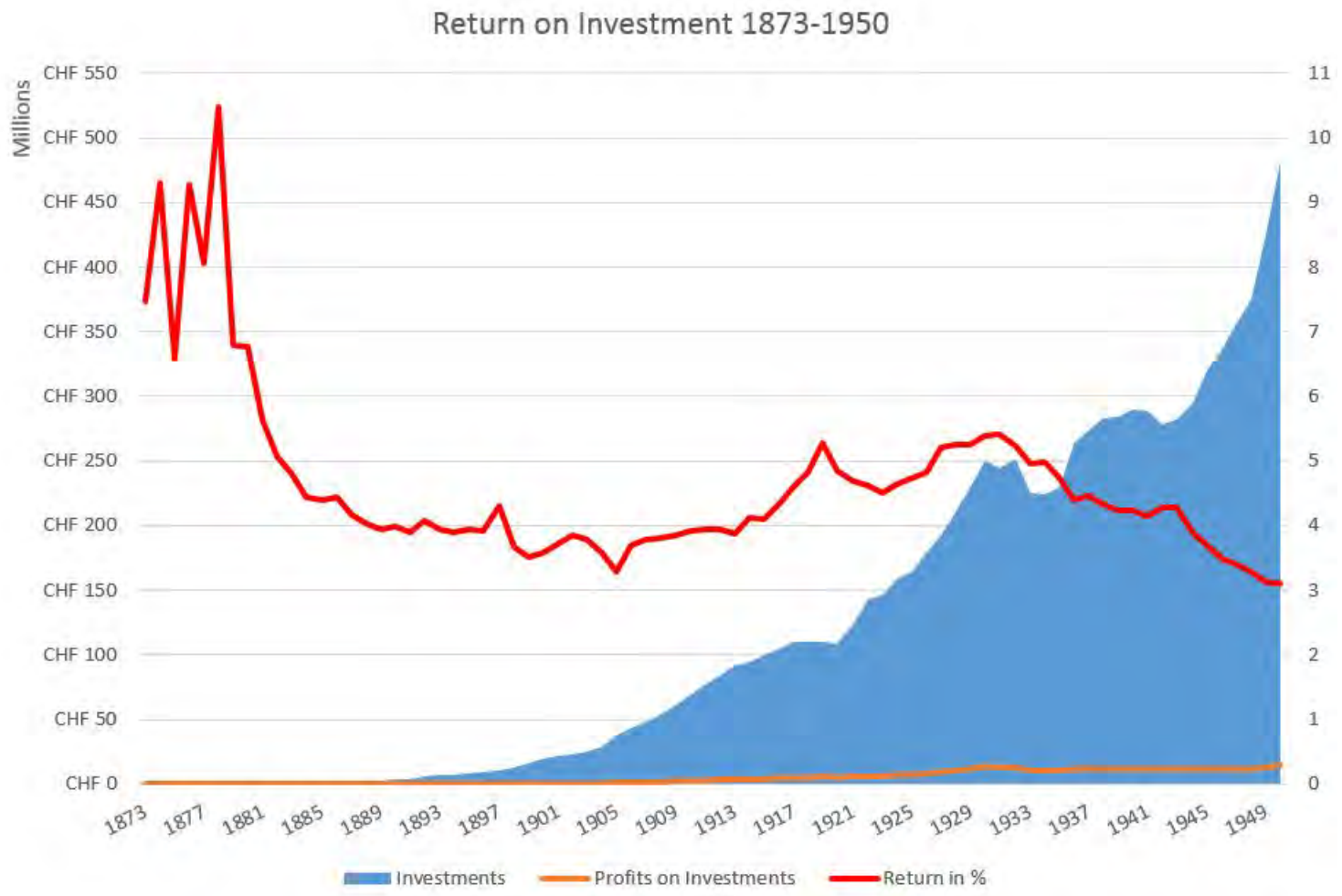


Investment and GWP

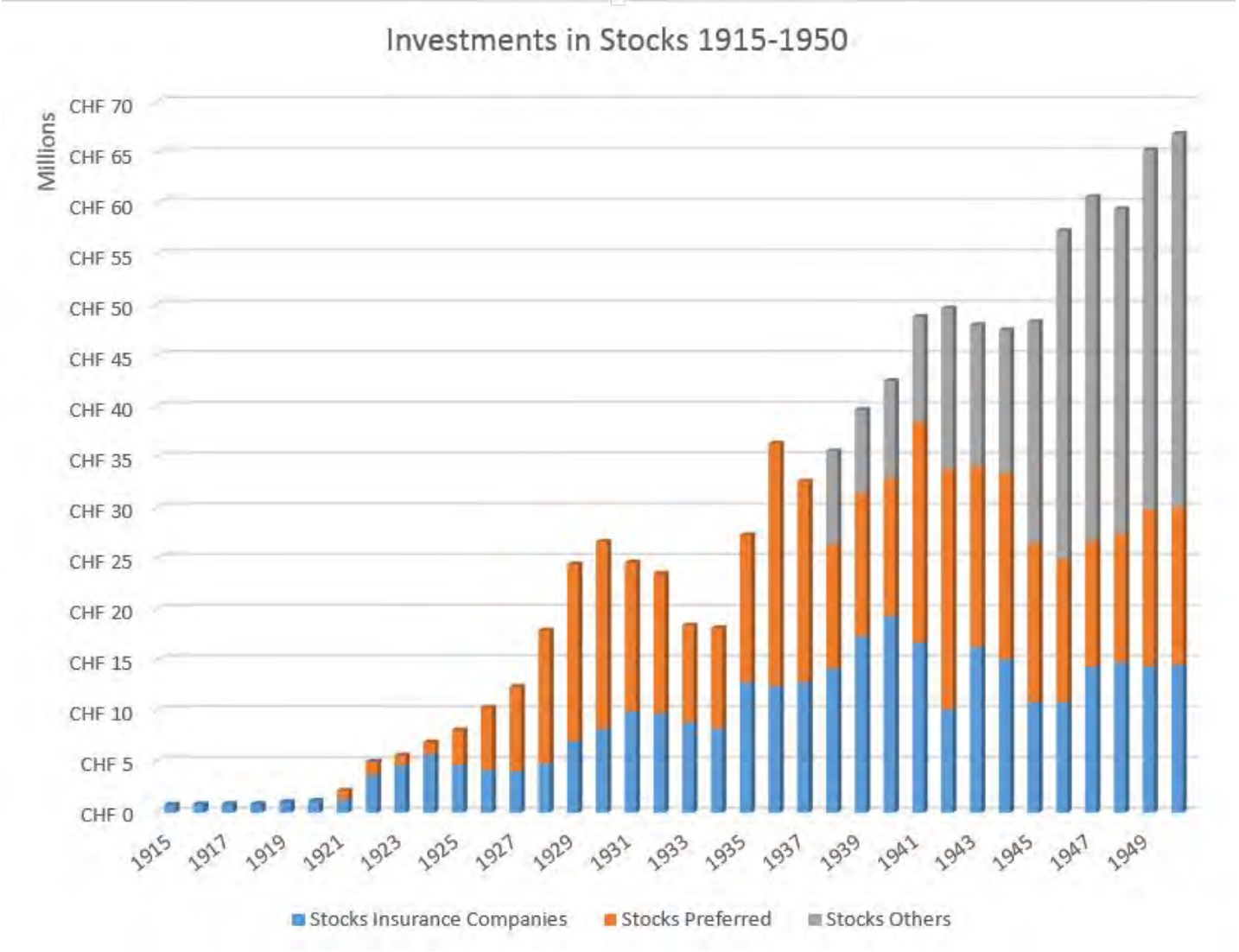
Experience of Germany and US



Investment profits



Stocks



Public Bonds & Utilities

US

Annual Report 1930

Amerikanische:		
Vereinigte Staaten von Amerika	„	6 355 251.20
Eisenbahnen	„	38 940 472.50
Elektrizitäts-Unternehmungen ("Public Utilities")	„	18 290 264.75
Industrie-Unternehmungen	„	2 519 656.25
Canadische:		
Dominion, Provinzen, Städte, Eisenbahnen	„	2 856 250.—

Annual Report 1940

Amerikanische:		
Vereinigte Staaten von Amerika (Bund)	„	35 088 000.—
Staaten und Städte	„	4 120 000.—
Eisenbahnen	„	18 117 258.16
Elektrizitäts-Unternehmungen ("Public Utilities")	„	13 809 500.—
Industrie-Unternehmungen	„	7 265 095.04
Canadische:		
Dominion, Provinzen, Städte, Eisenbahnen	„	3 867 228.40

Institutional Investors

The history of professional fund management

eabh in cooperation with Schroders and Banque Lombard Odier

26 October 2018, London, UK

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