CS207 #9, 21 Nov 2014

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Hewlett 103

Signup sheet

Report notes

- Always date your work. *If it's on-line it will stay around forever and you don't want to be embarrassed 10 years later.*
- Few had abstracts; objective statement; (decompose); conclusion
  - Good for your organization to state the objective. Have only one in a paper!
  - Good to get on-line readers to go *below the fold*
- If you cite web references, keep a copy on your files. *Web pages may disappear or be changed.*
- I also mark writing, although that is not a CS207 objective
- When you mail something out, include your name in addition to the course in the file name. *Makes it easier for me*
  Don't just want a bunch of `CS207report' files

Syllabus:

The order and coverage is flexible

1. Why should software be valued? Cost versus value.
2. Economic Flow. Market value of software companies.
3. Spending. Intellectual capital and property (IP).
4. Income from Sales and Service. Alternate Business models
5. Sales expectations and discounting of future income.
6. Principles of valuation.
7. Software growth.
8. Legal & forensics
9. The role of patents, copyrights, and trade secrets.
10. IP in a service company, protectable IP, fencing of customers'IP , know-how
11. Life and lag of software innovation.
12. How to grow a software company: organic or by acquisitions
13. Open source software; theory and reality. Freemium.
14. Separation of use rights from the property itself. Setting licensing rates.
15. Role of Government
16. Risks when outsourcing and offshoring development.
17. Effects of using taxhavens to house IP. Abolish Corporate taxation?

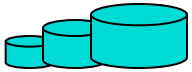
Offshoring

Task transfer to Enterprises in Foreign countries

Two aspects:

1. Work migration: jobs are moved to lower-cost countries

2. Support software etc. is moved to enable similar productivity in those countries



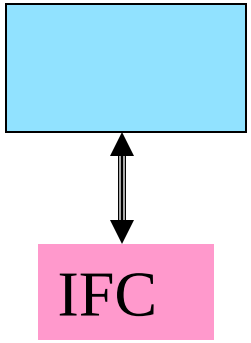
Income is generated by people and (intellectual) capital

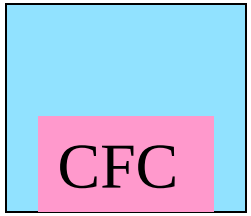
Hypothesis

- Offshoring of jobs is effective because of concurrent Intellectual Property (IP) transfer
- Much of that IP is corporate property
- Transfer of corporate IP & IP rights is poorly understood
  - IP as property is not well defined, hard to measure
  - There are many components to IP, coming from
    - *open source*, **R&D, marketing, reputation** as
    - Patents, copyright, trade secret (covered by NDAs)
- Even if hard to value, IP & IP rights is a significant export

Types of Foreign Entities

- **I**ndependent **F**oreign **C**ontractors
  - IFC may serve multiple customers
    - Share trade secrets with competitors
  - Owners need contracts to protect the IP
    - Hard to monitor and enforce
- Owned, **C**ontrolled **F**oreign **C**orporations
  - CFC provides much more control over IP
  - Ownership often in third-party countries
    - Avoids taxation of sales to other countries





Knowledge is the Link

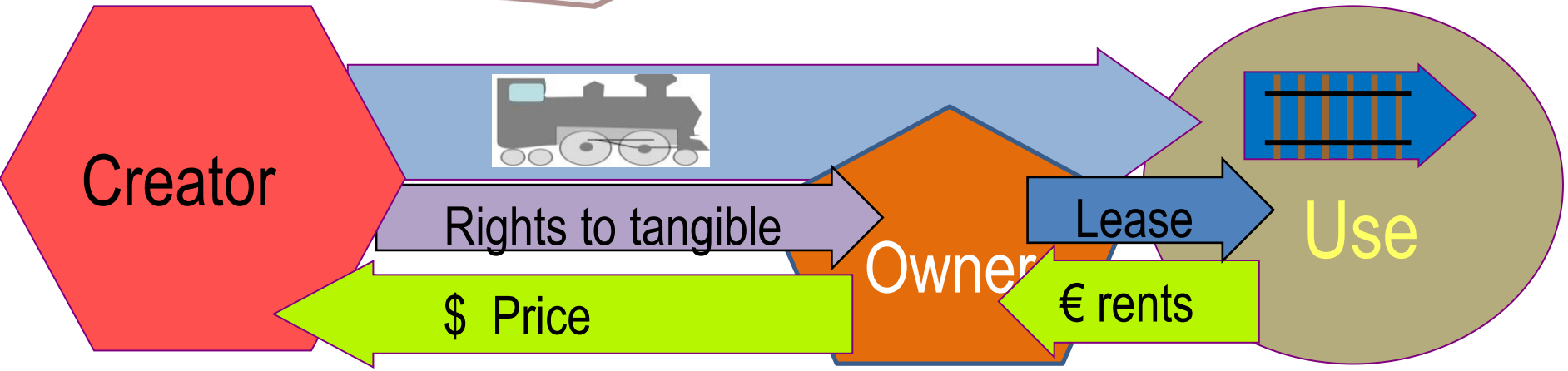
To be effective a worker has to know what has to be done

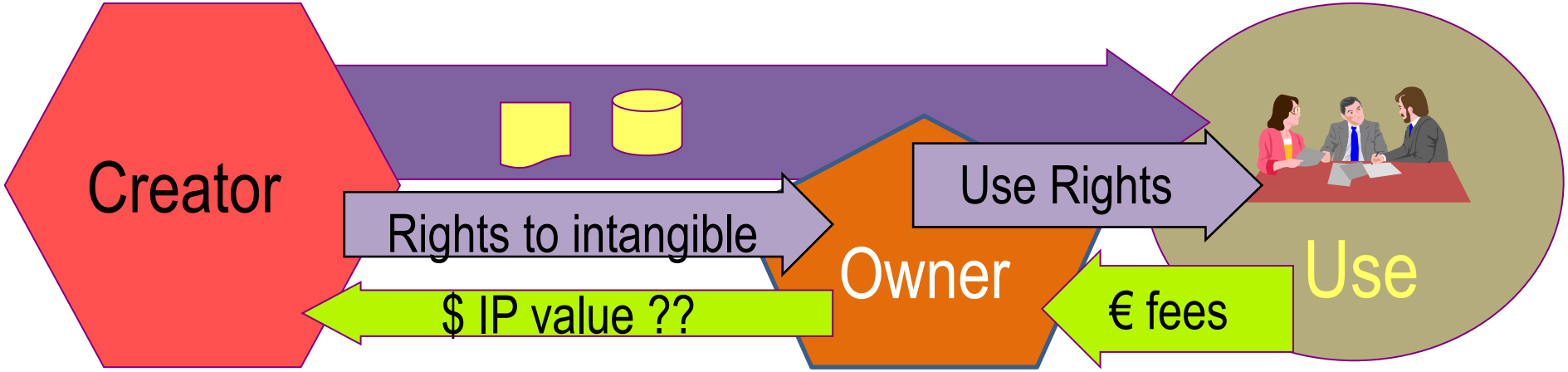
- call center employees
- technicians
- engineers
- managers

- That knowledge consists of
  - The technology
    - Documentation, prior versions, quality control
  - The business methods
    - How technology in the product is marketed
    - The flow from buyers to improved products and methods
- Companies distinguish themselves by proprietary IP
  1. Patents, sometimes Copyrights
  2. Confidential Documents
  3. Knowledge within its people - protected by NDAs

Trade secrets

Transfers of rights tangible ≈ intangible





But setting the right value is harder, and easily misused

Taxhavens

Places where

1. Taxes are low
2. Financial and IP supervision is minimal
3. Reporting requirements are minimal

DUTCH SANDWICH

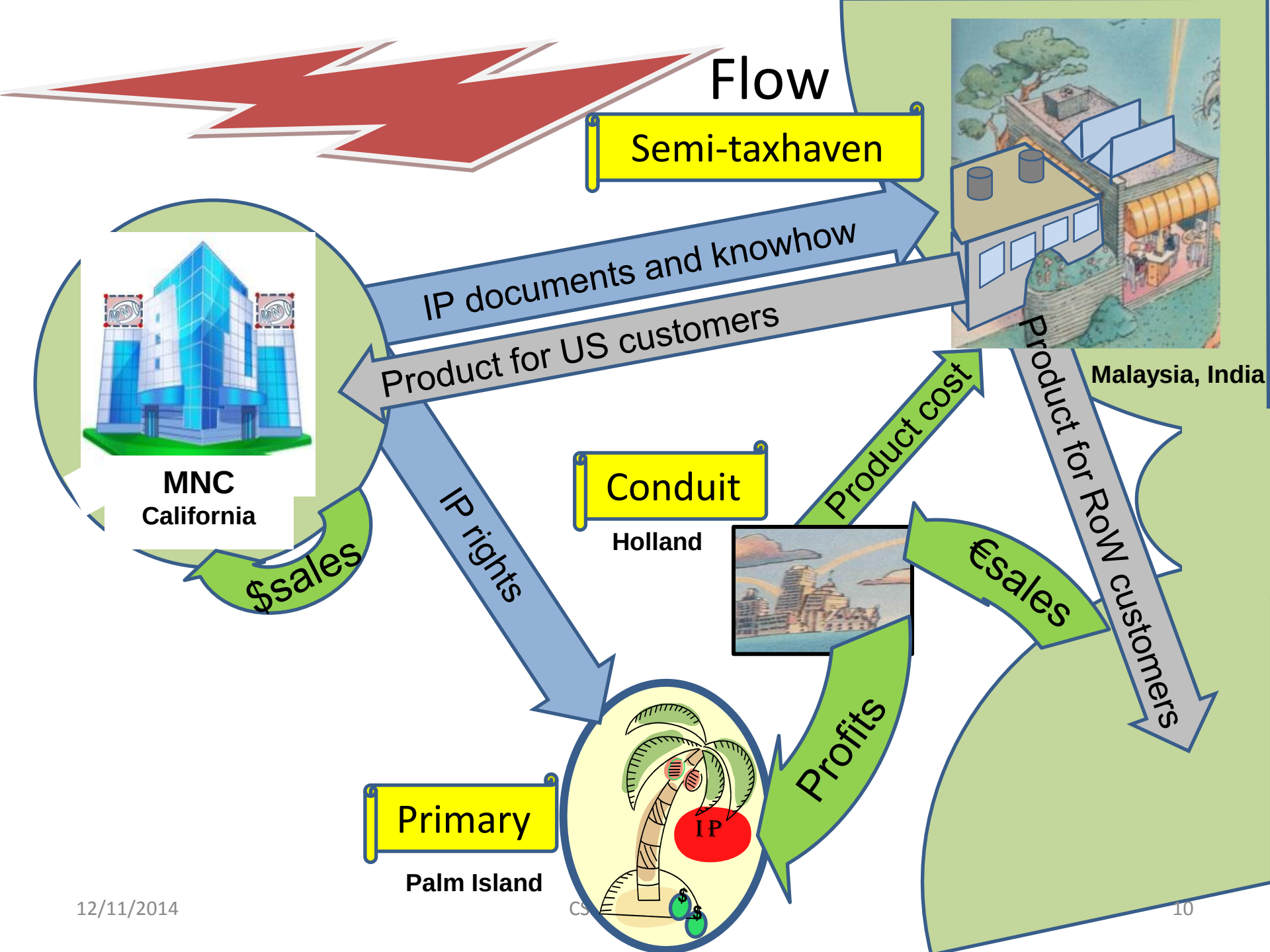
- Three *cooperating* types *are needed*

1. Primary tax havens (about a dozen countries)
   - Small populations,
   - Can live largely of license fees
     - Cayman Islands: pop. 50K, 90K companies @ 3000/year

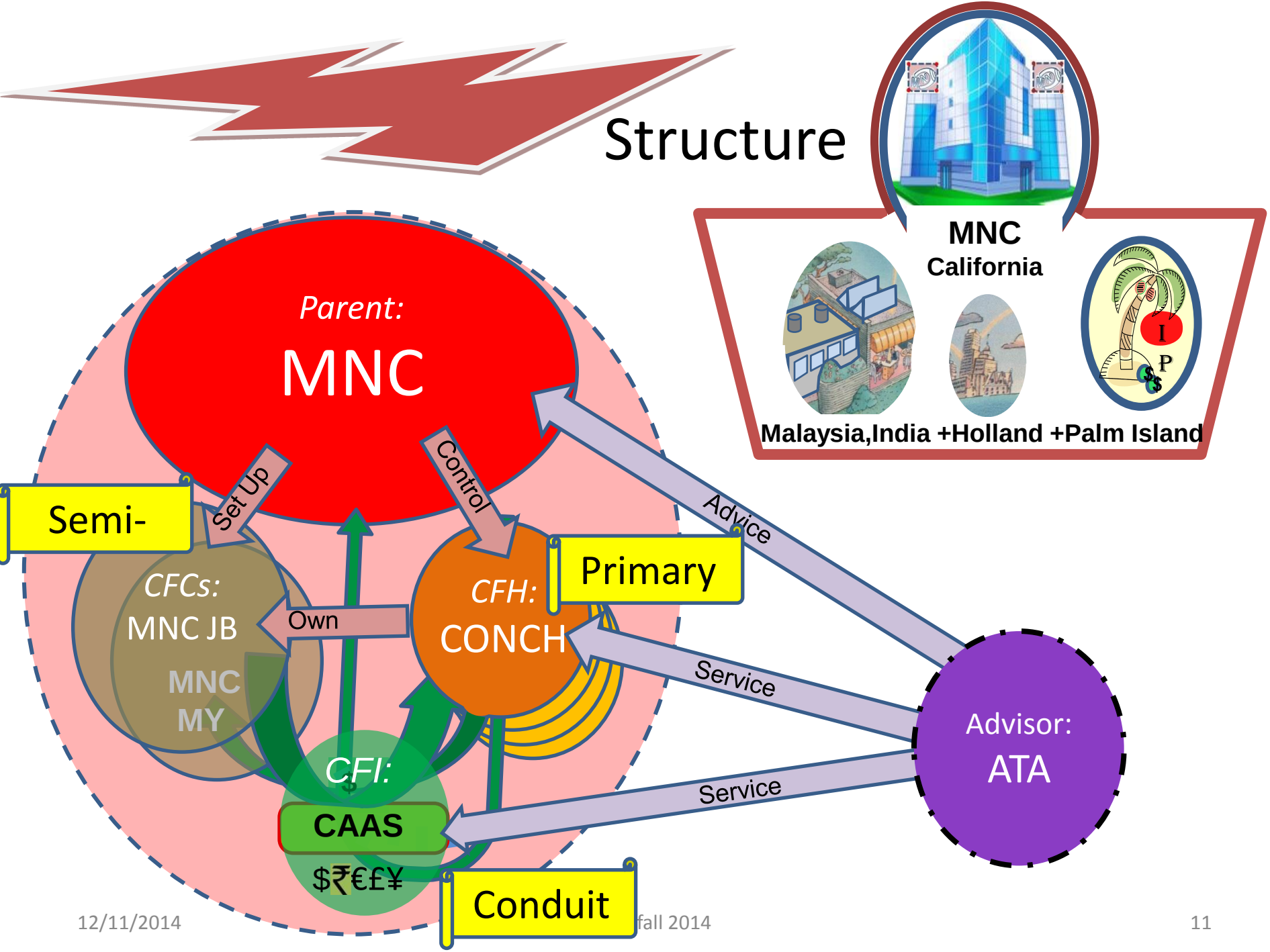
2. Semi-taxhavens (more, but diverse)
   - Large populations, need jobs
   - Enact, often temporary, tax benefits for foreign work

3. Conduit taxhavens (few, small, financially active countries)
   - trusted, separate taxhaven activities by *ringfencing*
   - can shuffle funds invisible among locations

Flow


Semi-taxhaven
IP documents and knowhow
Product for US customers
MNC
California
$sales
IP rights
Conduit
Holland
Product cost
€sales
Product for RoW customers
Malaysia, India
Profits
Primary
Palm Island
I P

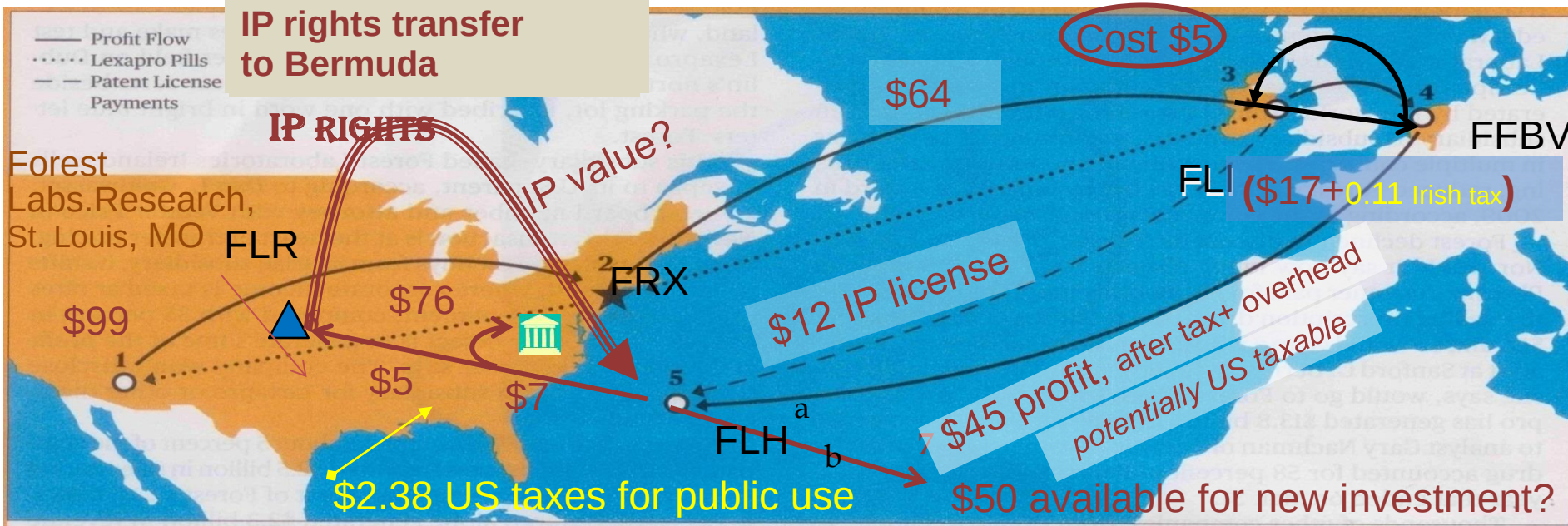
Structure


MNC
California
Malaysia,India +Holland +Palm Island
Parent:
MNC
Set Up
Control
Advice
Semi-
CFCs:
MNC JB
MNC
MY
Own
CFH:
CONCH
Primary
Service
Advisor:
ATA
Service
CFI:
CAAS
$₹€£¥
Conduit

Forest Labs flow

[from Business Week 14 May 2010]

0. Initial transaction:
IP rights transfer to Bermuda



1. Phoenix
Tyler Hurst purchases a prescription of Lexapro for $99 at a Phoenix Walgreens. The money heads east.

2. New York
Forest Laboratories, the maker of Lexapro, is headquartered in New York City. While all of the company's sales of Lexapro are in the U.S., most of the profits end up with an Irish subsidiary. The pills are purchased from the Irish subsidiary and distributed throughout the U.S.

3. Dublin
A subsidiary called Forest Laboratories Ireland manufactures and sells Lexapro to its U.S. parent. This lets Forest legally shift most profits from the U.S. to Ireland, avoiding a 35 percent U.S. corporate income tax. To reduce its tax bill even further, the manufacturing unit's corporate cousin, Forest Laboratories Holdings, registered an office in Hamilton, Bermuda, declaring the island its tax residence.

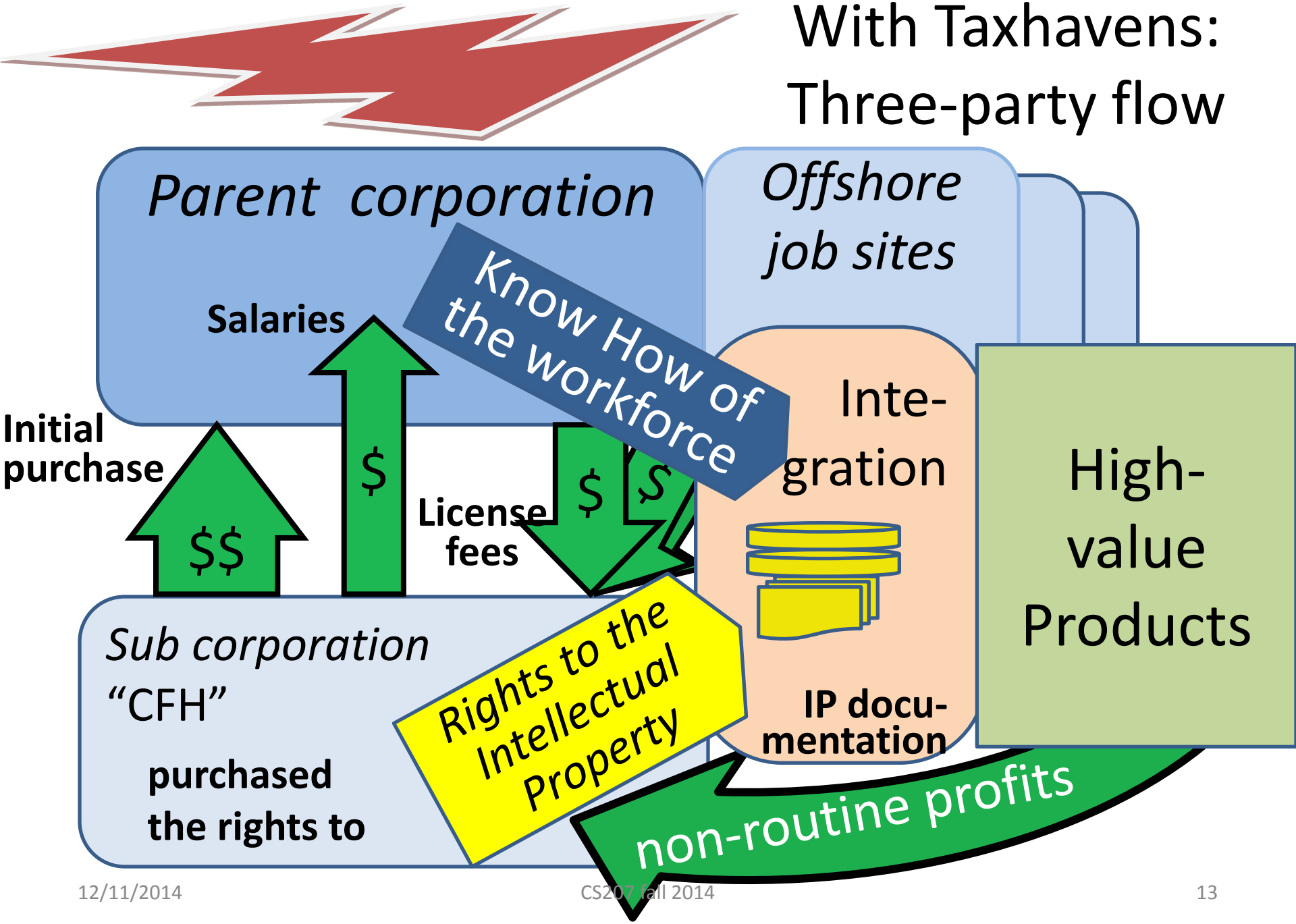
4. Amsterdam
Forest avoids a 20 percent Irish withholding tax on payments it sends to Bermuda by first paying another subsidiary, Forest Finance in the Netherlands. Forest Finance then pays the office in Bermuda. By going to another European Union member state first, the withholding tax is avoided.

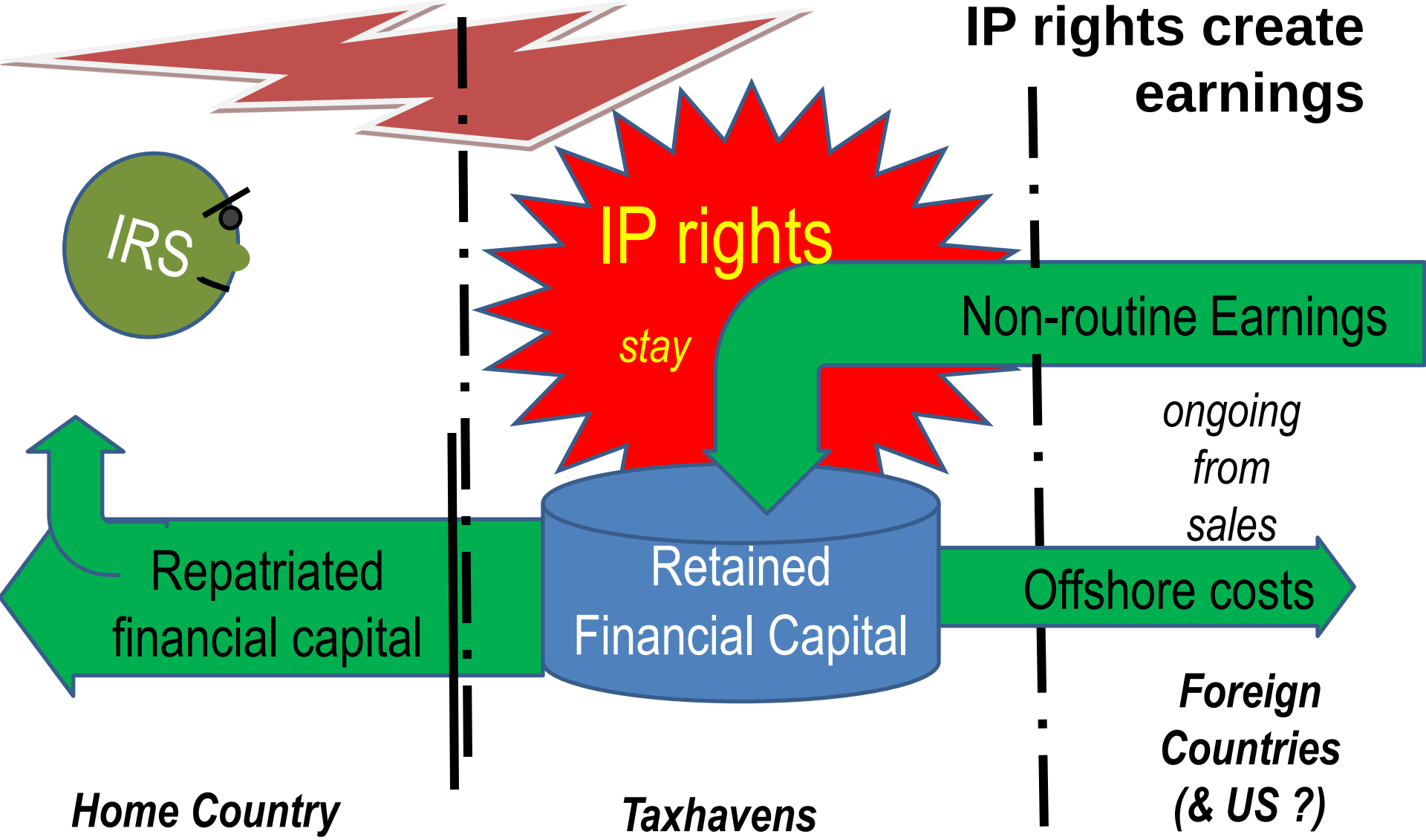
5. Bermuda
An Irish manufacturing unit of Forest pays the Bermuda office to sublicense Lexapro's patents. Those payments move the taxable profits out of Ireland and into Bermuda. This maneuver helped cut Forest's Irish income tax rate from 10.3 percent the year before to 2.4 percent the year after.

Bottom Line
Tax dollars that could be paid to the U.S. on profits generated by a product sold entirely in the U.S. are significantly reduced. Income taxes in Ireland are largely avoided. Technically, the U.S. taxes are deferred until Forest brings the offshore profits back home to the U.S. But American companies rarely repatriate significant portions of that income.

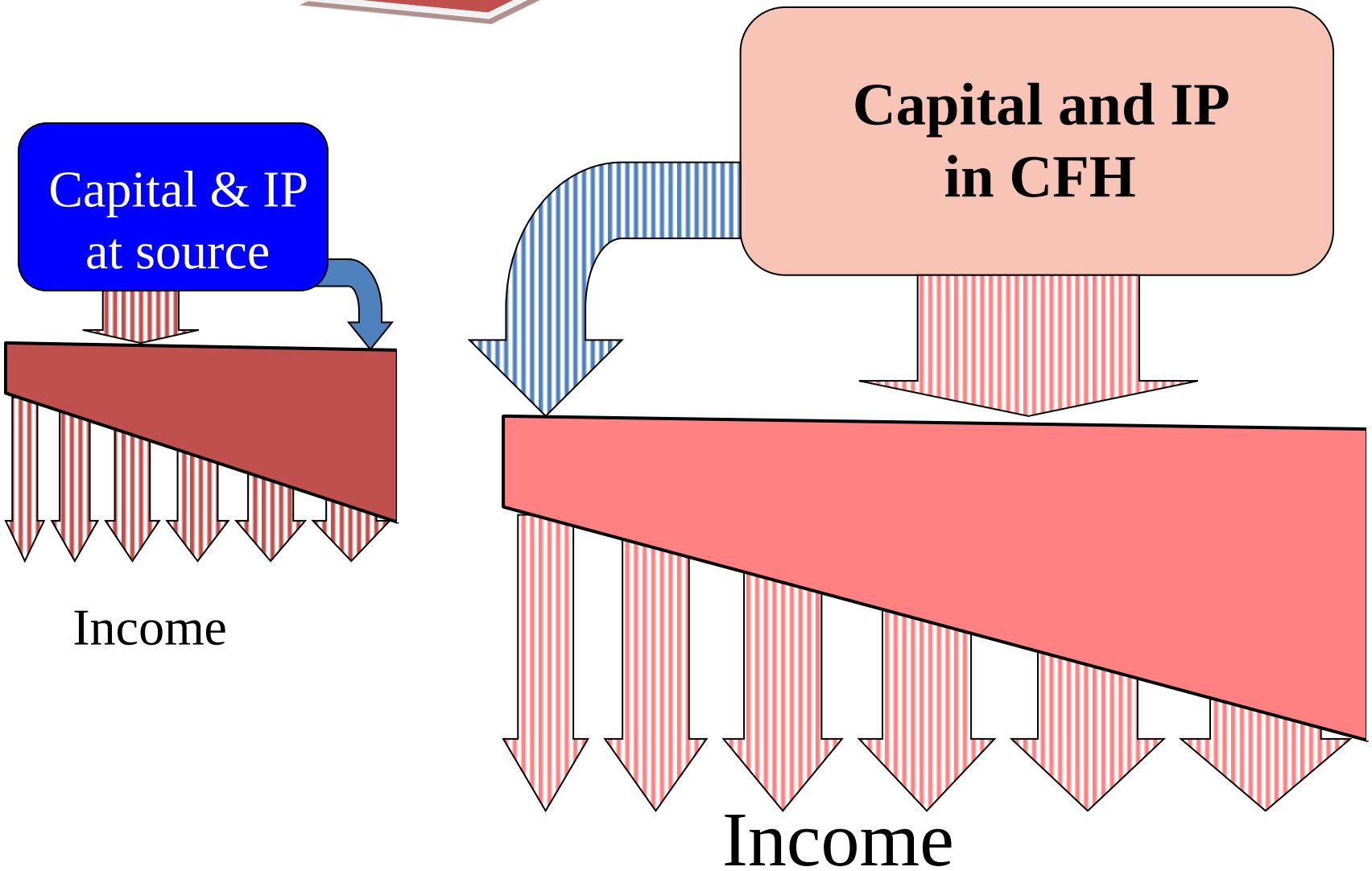
[Design Hermann Zschiegner]

With Taxhavens: Three-party flow




IP rights create earnings
IRS
IP rights
stay
Non-routine Earnings
ongoing from sales
Repatriated financial capital
Retained Financial Capital
Offshore costs
Home Country
Taxhavens
Foreign Countries (& US ?)

Capital and IP creates more IP and Income



Example

Apple paid less than 2% corporation tax on its profits outside the US, its filing with US regulators has shown.

The company paid $713m in 2013 to 29 Sept. on foreign pre-tax profits of $36.8bn, 1.9%.

It is the latest company to be identified as paying low rates of overseas tax, following Starbucks, Facebook and Google in recent weeks.

It has not been suggested that any of their tax avoidance schemes are illegal.

All of the companies pay considerable amounts of other taxes in the UK, such as National Insurance, and raise large sums of VAT.

Apple's figures for foreign tax appear on page 61 of **its form 10-K filing** with the US SEC.

The form is used to summarise the performance of public companies.

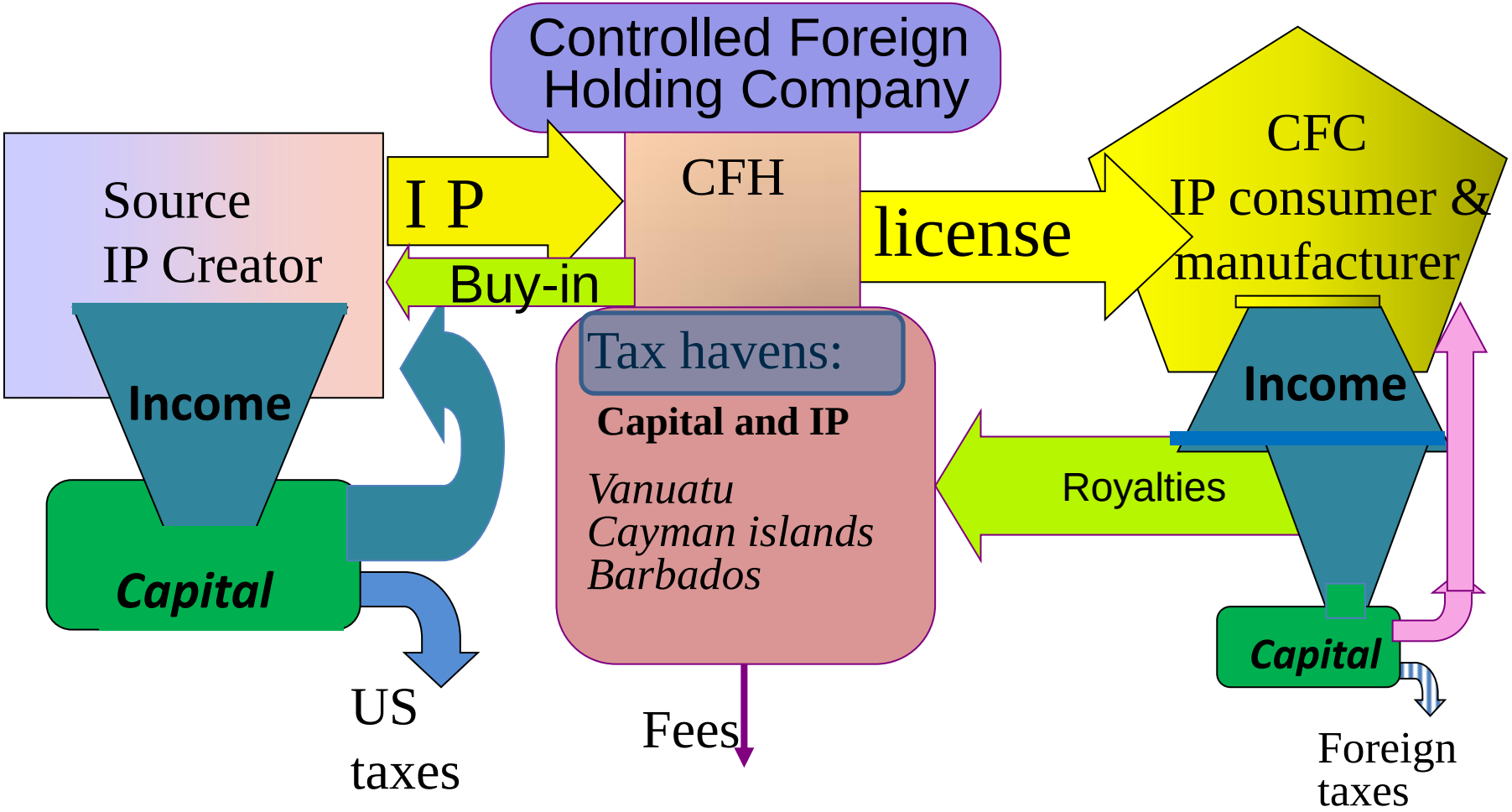
It had paid a rate of 2.5% the previous year.

Apple channels much of its business in Europe through a subsidiary in the Republic of Ireland, which has lower corporation tax than Britain.

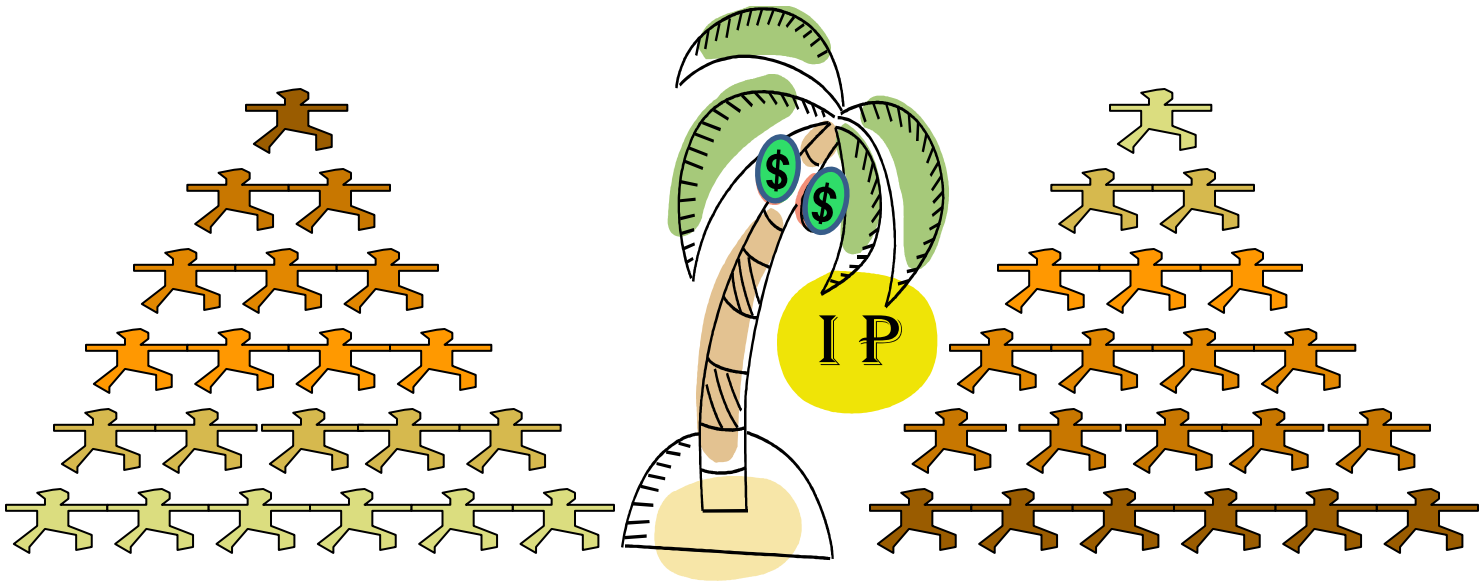
But even Ireland charges 12.5%, compared with Britain's 24%.

Many multinationals manage to pay substantially below the official corporation tax rates by using tax havens such as Caribbean islands. http://www.bbc.co.uk/news/business-20197710

Capital flow with a taxhaven



Job Flow @ different levels of personnel



Parent ----------→ CFC

Is knowledge transmitted from the top or acquired from experience at the bottom?

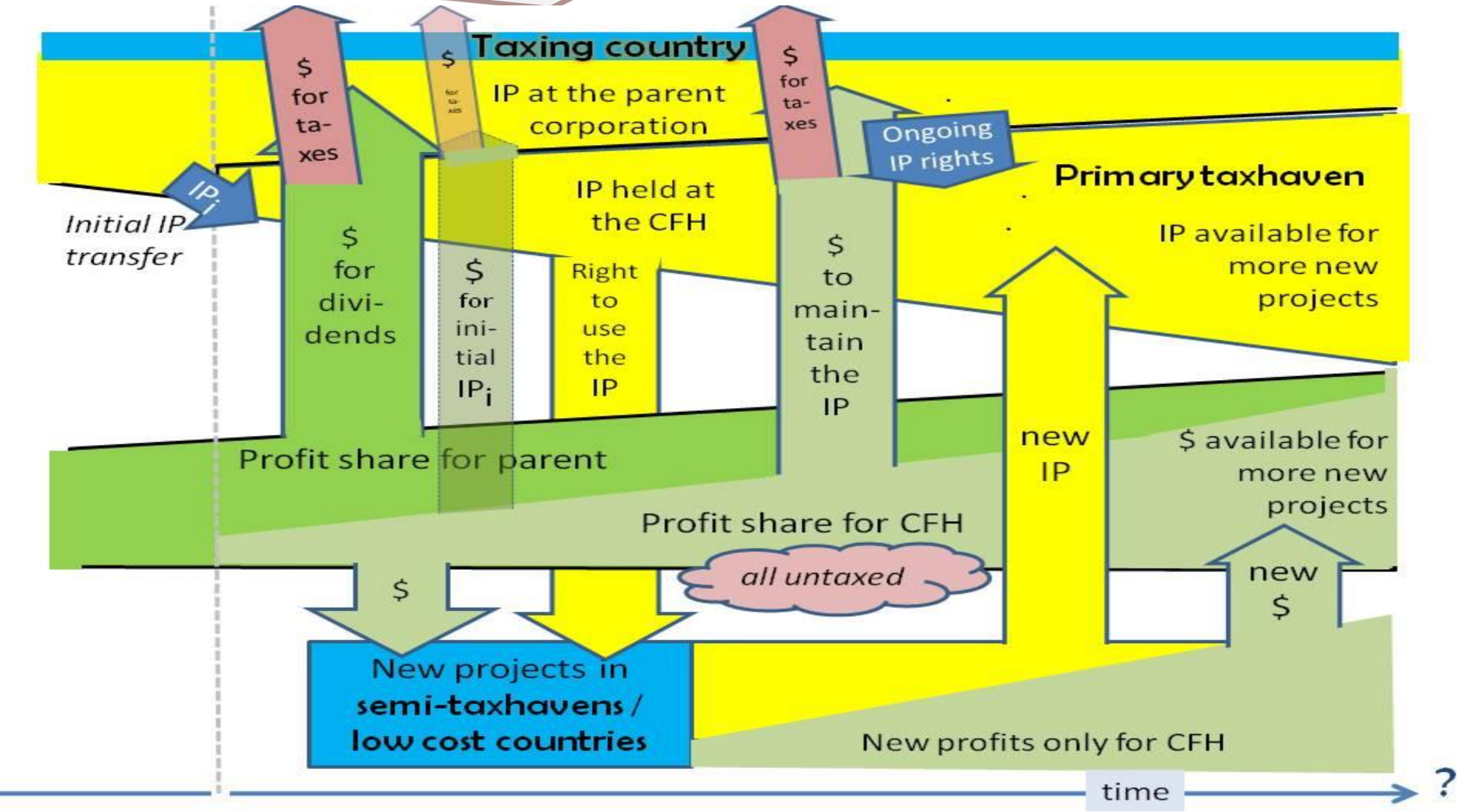
Longer term effect

- Repatriation of $$ from the CFH to the US is taxed.
- Current workers are paid by the CFH.

  US and offshore employees are unaware of the source of their paycheck

  - The CFH acquires an increasing fraction of the IP
  - The CFH is paid an increasing fraction of the income
  - The CFH in time can becomes richer than the company.
- It is more efficient for the company to invest in low-tax countries and create jobs there.
  - Job losses in the U.S. increase
- Eventually the CFH can buy the parent company.
  - Control by stockholders is gone as well

Effects over time



Related Intellectual capital issues

Not all intellectual capital is owned, property, IP

1. Education: Services that transmit valuable,

   but non-*proprietary* knowledge to others.

   - If receiver pays, certainly can take it anywhere
   - If the state pays, can it / should it be reimbursed? Now not.

2. Publication: I*P* placed into the public domain is no longer IP

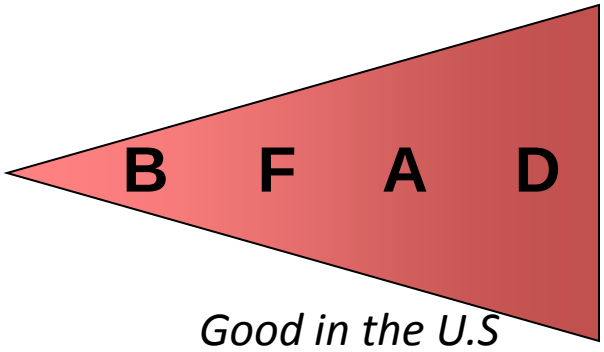
   - Who benefits?
     - The reader gets knowledge / The writer gets fame
     - Society becomes more egalitarian, effective

- These 2 aspects can easily confuse IP discussions

← Symmetry →

Exports and Transfers go both ways

- There is innovation everywhere
- If the U.S. imports IP, the receiver should pay
  - Basic and fundamental research in the U.S. is declining
    - Growth was motivated by WW II experience [Vannevar Bush]
    - Many countries now fund fundamental research
  - The ratio of applied to basic research is increasing
    - Industrial research is mainly applied
    - Technological research is rarely basic
  - Development requires more resources
    - Industrial and management infrastructure
    - Demonstration and Beta sites - early adopters



Future: Outsourcing and IP export

Need Increased understanding and accounting for IP exports
(making them visible)

To rationalize political concern by populists & traditional conservatives
versus strong lobbyists pressures and globalists

Correct pricing, licensing and its taxation of IP exports

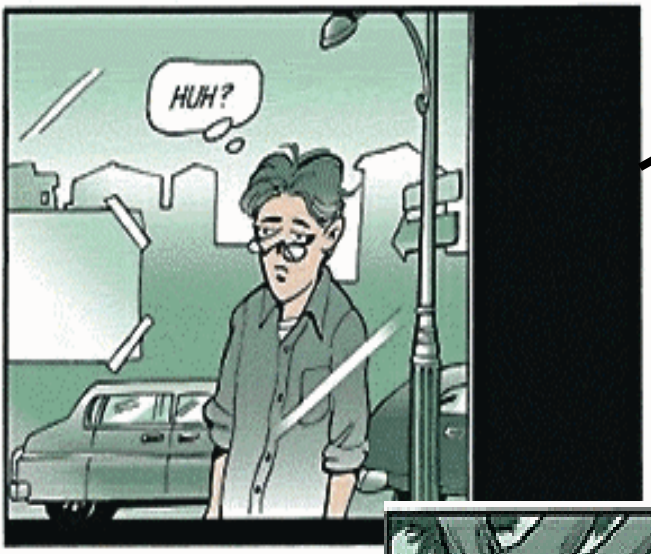
- will increase corporate profits in the U.S.
- reduce cash in offshore accounts, more for U.S. investment
- provide taxes that could be used to compensate
  - for R&D support provided by the government
  - for educational costs
  - for unfunded retirement benefits of workers whose IP was outsourced
- Is unlikely to stop offshoring substantially

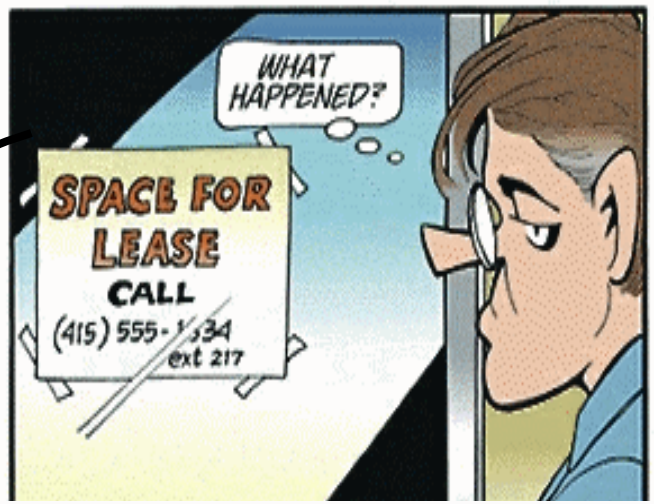
- Amounts would be large in a number of cases
- But ….

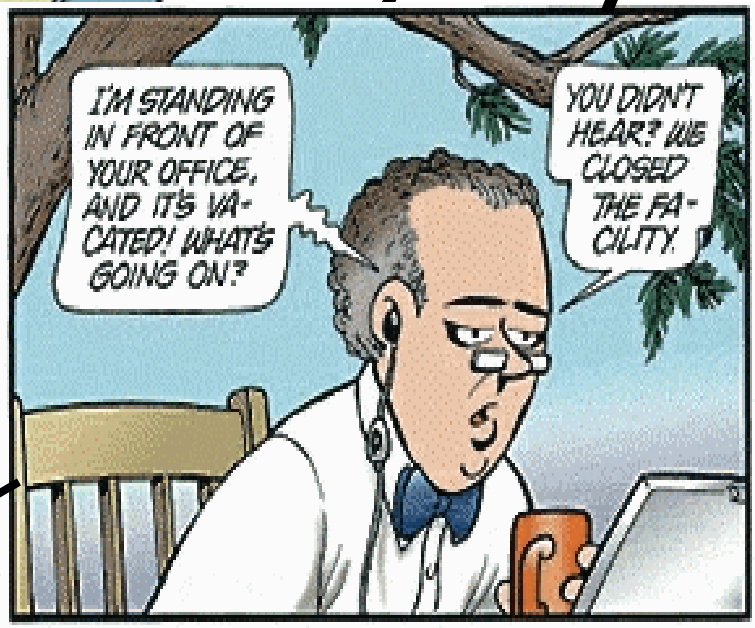
Doonesbury 1/2

September 21, 2003

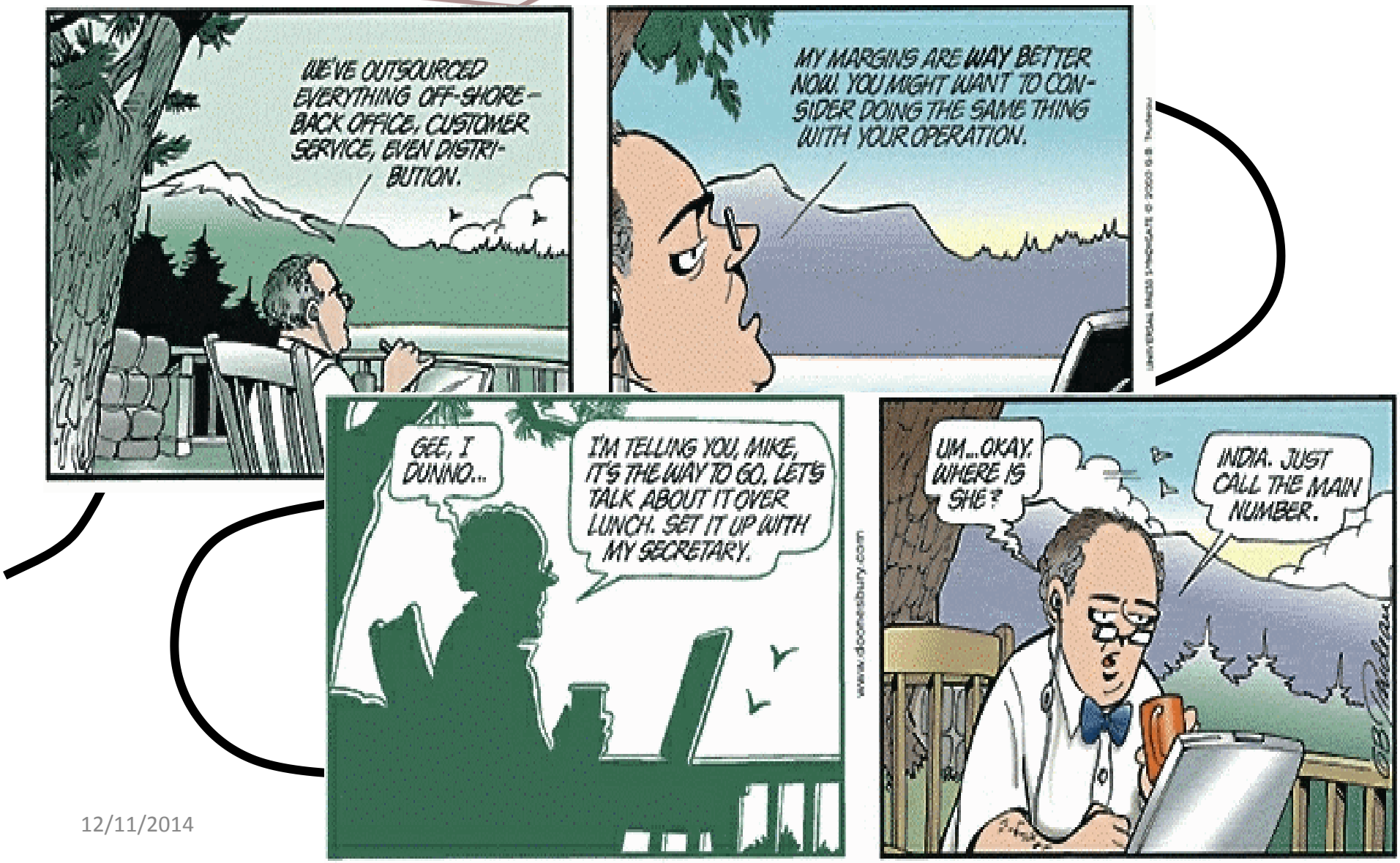
previous date | next date







Doonsbury 2/2



Vishal Sikka

Taxes

Can have a big effect on profits (20-50%) and hence a big effect on valuation of IP

1. Role of taxes, tax avoidance vs. tax evasion.
2. How does extreme tax avoidance work?
3. Economic flow in society.
4. An extreme recommendation.

Role of taxes

Operate government beyond income from

- Fees for services, import and export duties
- Supplies funds desired for

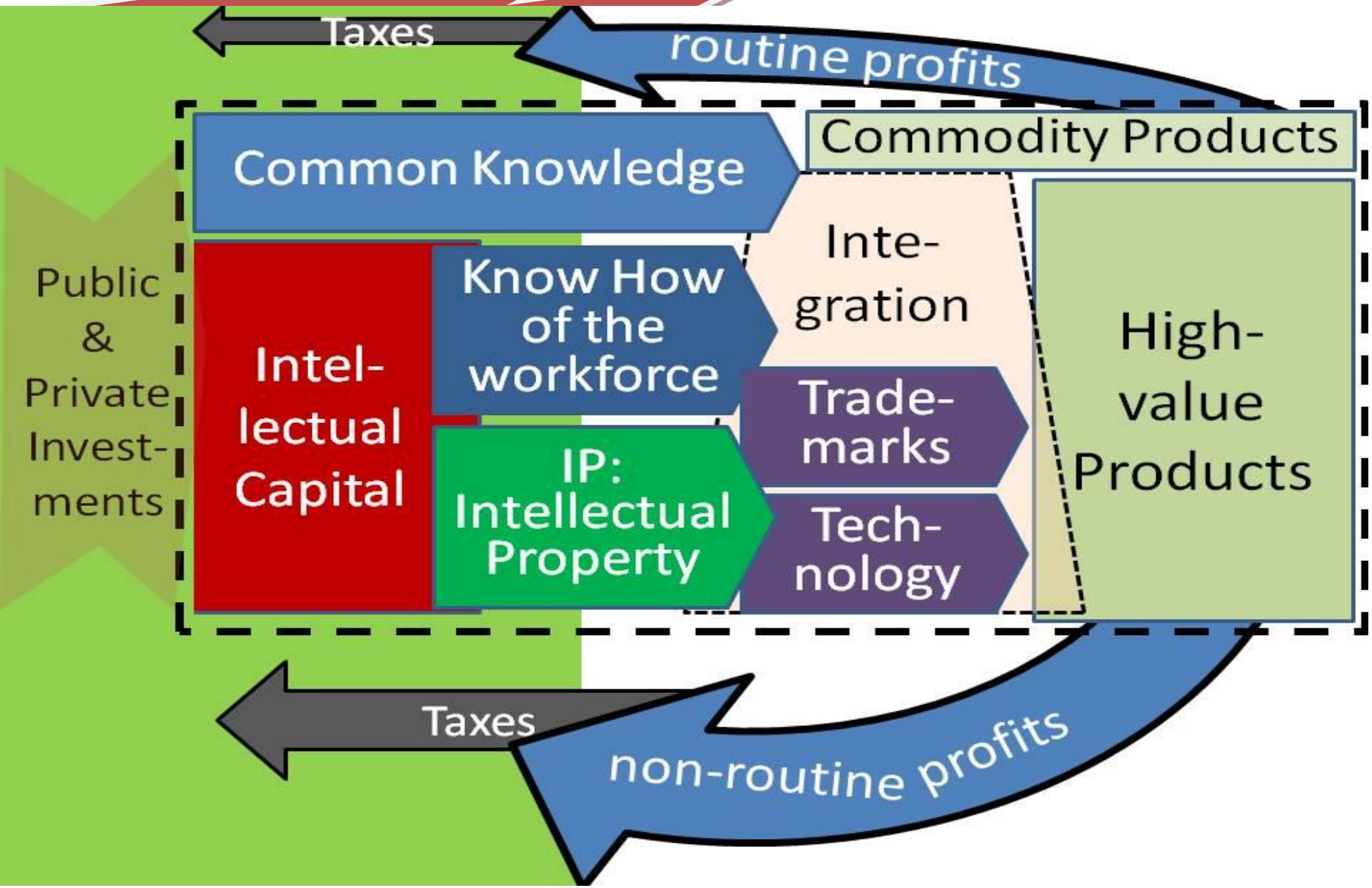
1. Defense of country and its business interests, federal
2. Infrastructure, federal beyond local and state
3. Education, federal beyond local and state
4. Social services, federal beyond local and state

- Serves

1. Individuals paid on most income (not mortgage interest)
2. Corporations paid on profit (income minus expenses)

similar expectations, different lifetimes

Expected Economic Loop



Tax avoidance vs. Tax evasion

Avoidance is legal

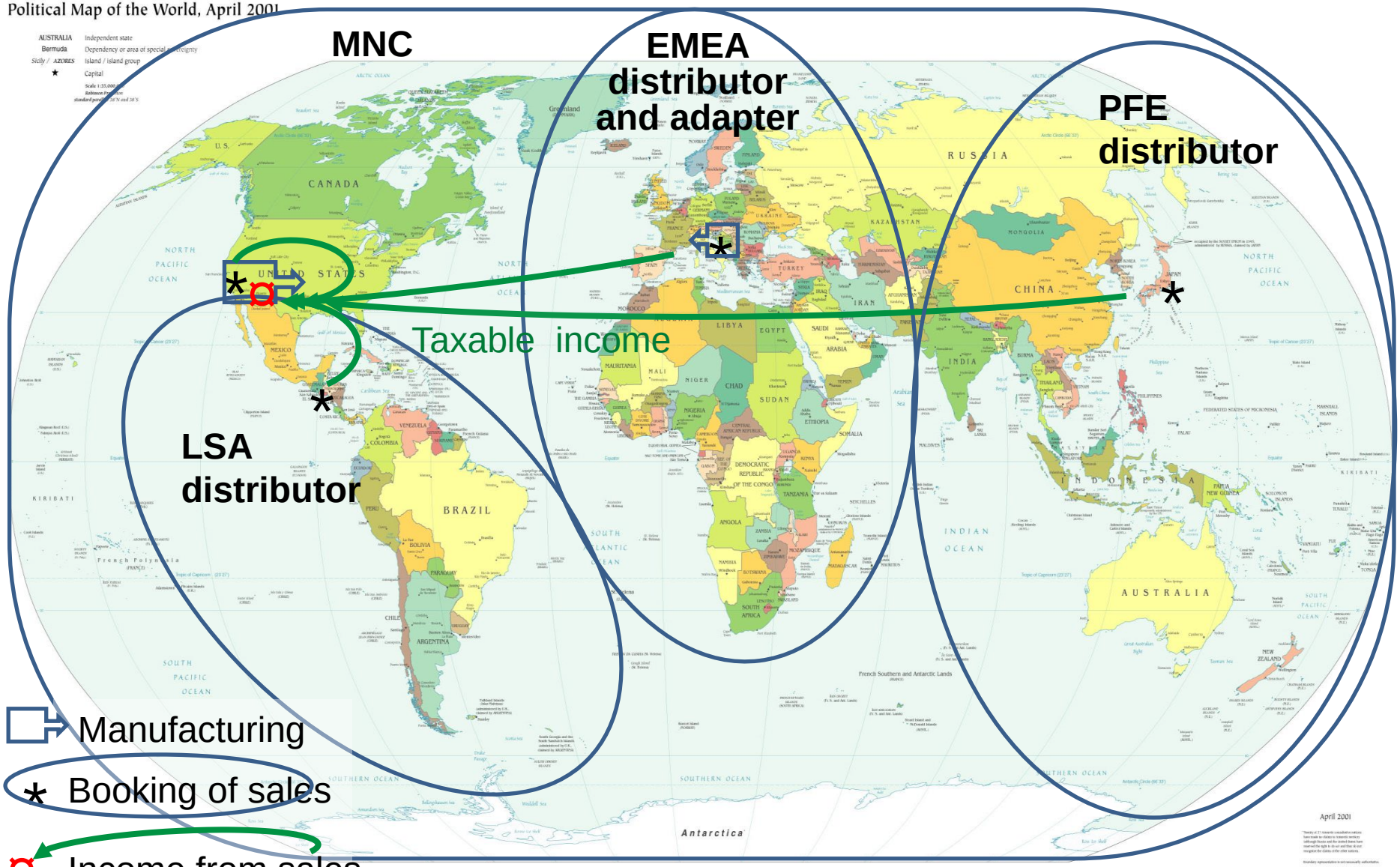
- Listing all business costs
- Deducting business loan cost
- Using the >1000 tax expenditures as health care, solar, veterans, clean...
- Not paying more than legally required
- Deducting costs for encouraging new sales
- Transferring IP rights to other producers
- Sharing costs & profits with offshore collaborators
- Stating offshore income is held for offshore uses

Evasion is illegal

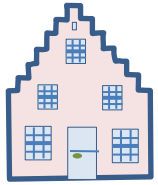
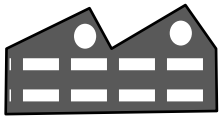
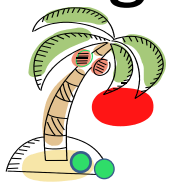
- Not filing required tax returns
- Classifying fun as business .
- Misuse of tax provisions.
- Hiding taxable income
- Predating options
- Paying bribes .
- Misvaluation
- Poor split
- falsely

Extreme tax avoidance

Worldwide sales imagined



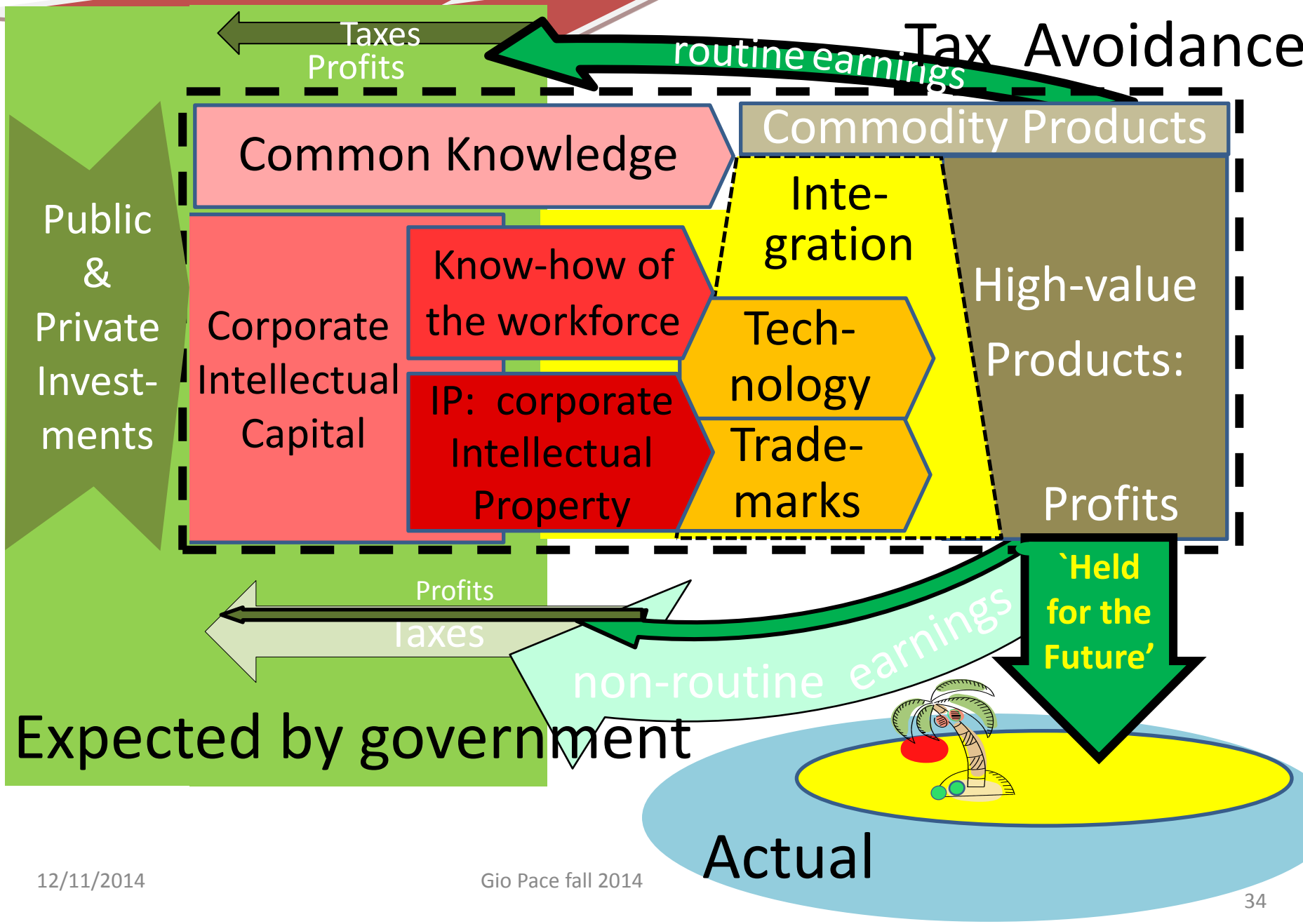
Multinational tax avoidance

- Sell in major regions or globally **MNC**
- Have a subsidiary in a trustworthy country collect the revenues *R*.  & subs: **CAAS**
- to distribute manufacturing costs  (China+)
- Distribute software maintenance costs (India+)
- Pay dividends (taxed) if you must (owners+)
- Pay for forward looking R&D  (engineers)
- Left are profits for growth or holding keep those in a tax-free place  30-80% *R* **Conch**

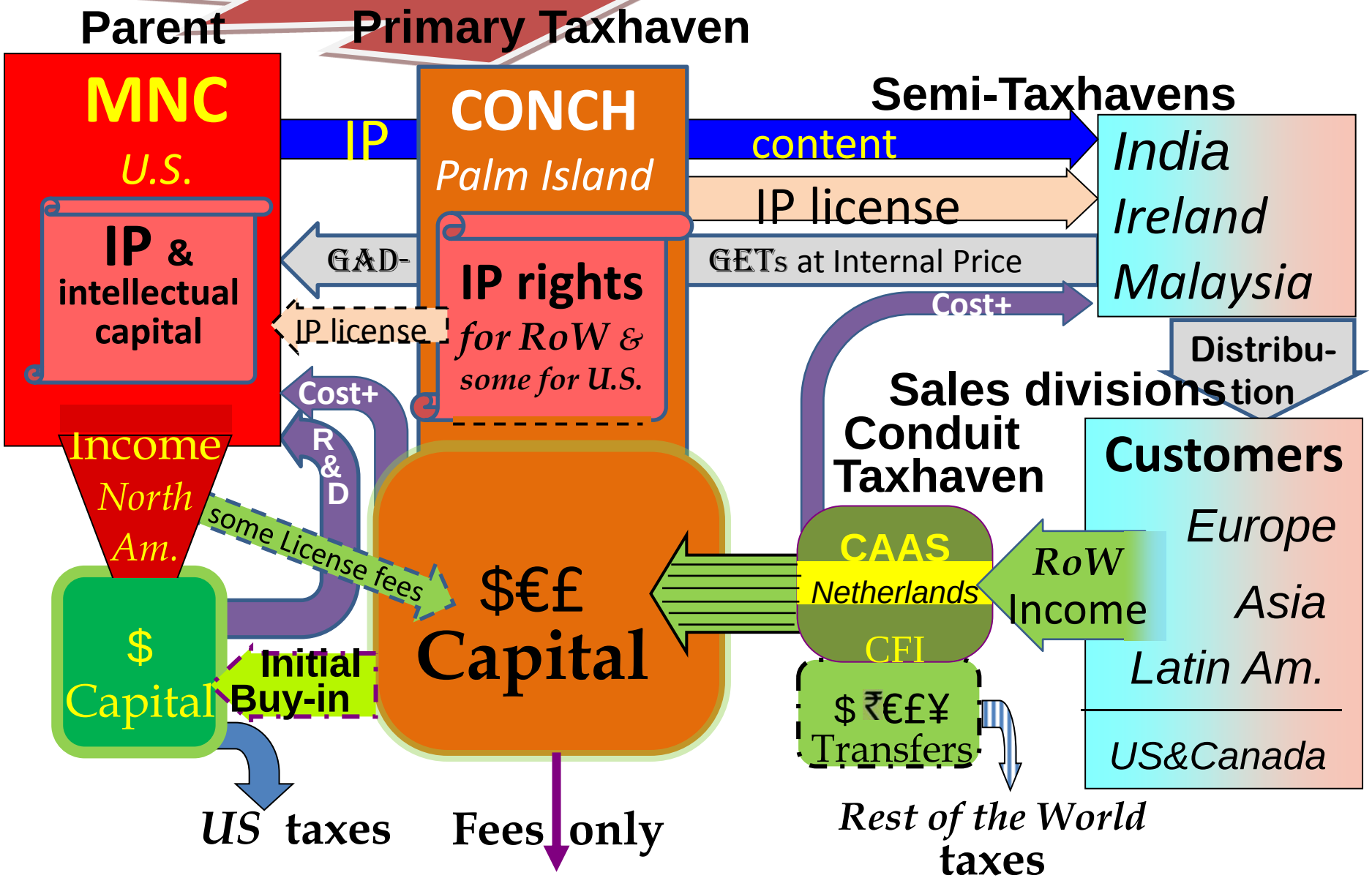
Flow of revenues after a taxhaven is established

map from CIA Factbook

Economic Loop with Tax Avoidance



It takes experts to set up avoidance



Boundaries of behavior

When is being not fully honest to the IRS ok?

- ❑ Filling in a form and entering unverifiable tips income
- ❑ Filling in an inscrutable form and checking *not applicable*
- ❑ When you move assets overseas where they are invisible
- ❑ When you have to make an estimate of an unknown
  - The value of future income from a sale of IP rights
    - ➢ Oct.2013 Twitter arranged to sell rights to its IP offshore *

      I don't know for how much, it was not a public corporation then

      [Taxes would be due on that sale]

      likely less than

      * Biddle13
    - ➢ In Nov.2013 it had an IPO, and become public at $24B

      [Twitter could not afford to pay taxes on a $24B sale]

Who is being dishonest?

- The corporation – The Corporate person?
  - if you don't believe in corporate personhood, go on
- The directors of the corporation
  - they are supposed to represent broad interests
- The tax advisors to the corporation
  - they set up the structure
    - often own the offshore locations and mailboxes
- The shareholders, they're the real owners
- The employees, who are often shareholders
- Corporate accountants – without decision power

2 Ethics principles

Don't look for issues

Blame someone else

Wir haben es nicht gewußt

Motivation for the enabling law

Cooperation with foreign partners
Sharing of costs and benefits

Intent

- Equal partners
- Agreement by negotiation
- Complementing contributions
  - design
  - manufacturing
  - distribution
- Sales in respective regions

Initial payment for balance

Exploitation

- Owner and subsidiary
- Signers have same boss
- Cost-based contributions
  - costs in the US
  - revenue global
  - benefits offshore
- Sales booked at controlled intermediate subsidiaries

Initial imba-lance

Money

- Income, represented by Money, is the objective
- What is money
- It is an owned asset that can be exchanged for other, real goods and the happiness they bring
- What gives money its value
- the money we use is debt-instrument backed by a trustworthy asset, *maybe?* Bitcoin
- In the US the faith we have in the US government

Backing

Originally most countries were on the gold standard – mixed with silver in the US (bimetallic coinage)

- a ten-dollar coin was tiny, but real gold
  - Spanish doubloons

- common were silver dollars
  - Joachims**thaler** – a silver mine in Bohemia
- Other assets are feasible – they should not be easy to falsify and in limited supply
  - Shells
  - Corn
  - Oil

- pork bellies
- aluminum lire
- milk chits (Italy, 1950)

Paper money

- "Real money" is hard to handle ↓
- "Real money" is hard to manipulate ↑ & ↓

A government can keep gold and silver (specie) in its treasury and issue gold or silver certificates

- "dollar bills"
  - One on display with the IBM cards on 2nd floor
  - ➢ You could take them to federal bank and get gold
  - ➢ Gold miners would take their gold to the SF mint and could get gold certificates.

Fiat money

- Being on the gold standard has a problem
  - When more money is needed as in times of war, the government can print more gold certificates
  - But with the same backing the value deflates
- The U.S. went off the gold standard (more than once)
  - 5 April 1933 US citizen could no longer hold monetary gold/silver
  - 15 Aug. 1971 when it no longer allowed foreign countries to exchange US debt
- Now backed by "The *Full Faith and Credit*" [Article IV, Section 1 of the USC]
- But now not based on a tangible asset,

  but by the ability of government to levy taxes

Who can create *fiat money*?

- Anyone who has assets and is trusted

1. The Federal Reserve Bank $ ← taxes & trust
2. A bank can make loans ← assets held & trust for excess
3. A government reserve bank (UK BoE, ...) £, ¥, ₹ ← taxes
4. The European Central Bank € ← trust not ~~taxes~~ directly
5. Any financial institution with some assets & trust

Since ~1955 City-of-London banks & their offshore branches create

Eurodollars ← offshore income based on **IP** & trust

$2,600,000M in 1988 "*the largest source of capital in the world*" [Kynaston:02, p.696]

Investors don't care about the color of the money.

Discussion topics
for next, last class

- General IP *3 slides*
- Advertising on the web *9 slides*
- Corporate growth patterns *9 slides*
- Money *5 slides*