

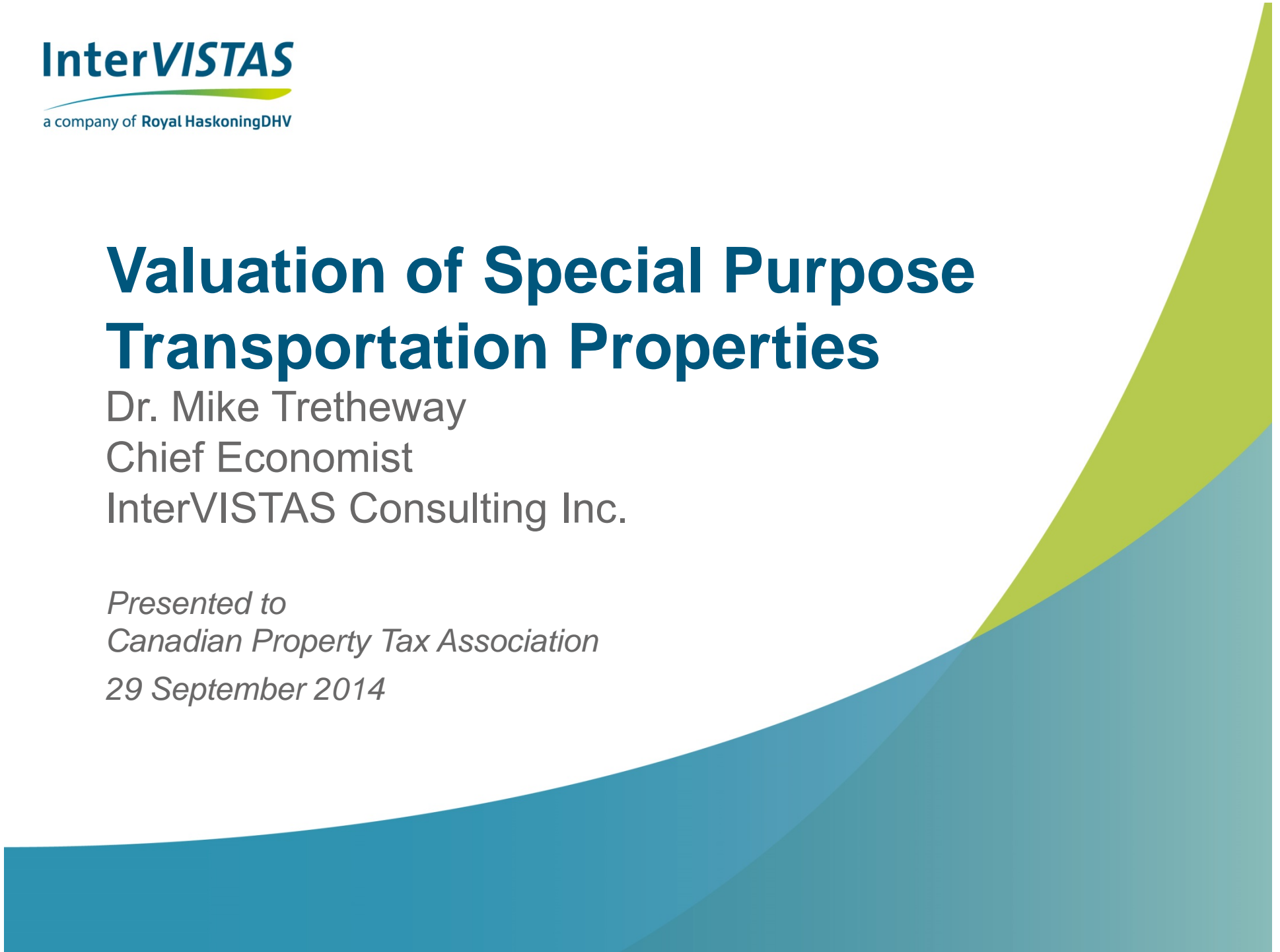
InterVISTAS

a company of Royal HaskoningDHV

Valuation of Special Purpose Transportation Properties

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*Presented to
Canadian Property Tax Association
29 September 2014*



Background

- InterVISTAS Consulting Inc.
 - Aviation - Transportation – Tourism
 - Vancouver based
 - Offices in Washington DC, Boston, London, Hague
Sao Paulo
- Mike Tretheway
 - University of British Columbia 1983-96,
Adjunct Professor since 1996
- Economist
 - Valuation of 4 airport properties in Canada
 - Valuation of Sydney (Australia) Airport

Core Principles

Economic valuation of land

- a long standing topic in economics
- Contributed several core principles of economics
 - Scarcity
 - Opportunity cost
 - Diminishing returns

Key valuation contributors

- Adam Smith (1776) *Wealth of Nations*
 - “Father of modern economics”
- David Richard (1817) *Principles of Political Economy and Taxation*
- Alfred Marshal (1890)

Core Classical Principles

Value of land, or the rent to be derived from land, should be based on the income from use of the land from its *best alternative use*

- ***Best Alternative Use***
 - ***To eliminate special value unique to an individual***
 - » ***Mrs. Smith places an extremely high value on low productivity agricultural land***
 - *Has been in family for generations*
 - *Parents, children, etc. buried on the land*
 - » ***What is best alternative use:***
 - *Low value agricultural land ?*
 - *Another use?*

Core Principals

Best alternative use

- Can be current use, but without special value

Core Principles

How do we establish this value?

- Comparable transactions approach
 - Market transactions are generally viewed as an effective means
 - Need frequent, current, *comparable* transactions
 - There are some limitations
- **Inference from market transactions**
 - House with 4 bedrooms
when all market transactions are 2 and 3 bedrooms

Some Examples of Valuation Challenges

- **Market transactions that are not comparable**
 - **Sale of a very large property will change market supply relative to demand and thus will change the price**
 - **Note: Private airport investors do not use any comparable land values**
 - » **They may compare value globally on pax basis**
 - » **But not with reference to land values**
- **Remediation costs**
 - **A particular property may require substantial remediation costs not required by other properties**

Some Examples of Valuation Challenges

Nearby properties may have values based on proximity to infrastructure access

- **Examples: property near an airport, port, bridge**
- **Circular reasoning if used for valuation**
- **If use of airport land changes, the proximity value of adjacent lands collapses**

Core Principles

How do we establish this value?

- **Cost basis**

- A problem with cost basis is creation of special value

- » Folly: Hearst Castle

- Alternative use is not the same as the personal use

Cost as a Basis for Valuation

Equates value with costs

- This is usually incorrect
 - Costs \neq price \neq value
- Incorrectly assigns cost of special value to property value
 - » Subjective value to owner
 - » This is incorrect

Costs in distant past often not reasonable

- Different technology
 - » Optimized depreciated replacement cost concept or Replacement Cost⁰ Less Depreciation

Airports and Cost Basis

Many airports have substantial special value

- Most airports in Canada would not be built today especially if land assembly costs included
- Government built airports or provided land access due to special value government derives from airport
 - Government reaps significant externality values
 - » Social value / Economic values
 - » Even increased property value of adjacent land
 - Gov't is willing to invest in costs substantially in excess of value as an airport due to these externalities
 - » But a private operator cannot realize these values
and would not invest

Core Principles

How do we establish this value?

- **Discounted Cash Flow**

- This is often the best valuation method for buying and selling of *enterprises*
 - » With adjustment for any end of life values
- Uses actual or hypothetical enterprise financial statements
- Caution for application to land: there may be other reasons for profits
 - » Two tunnels on a railway line/land

Airports in Canada

Categories of Airports

- **National Airport System**
 - 25 airports owned by federal government
Leased to not-for-profit airport authorities
- **Regional/local airports**
 - Formerly operated by Transport Canada
 - Used for commercial service
 - Sold to cities or societies or authorities
- **Other airports**
 - Hundreds of general aviation airports

National Airport System

Ground lease from federal government to authorities

- Ground lease requires that the airport land can only be used as an airport
 - » Land must be surrendered to federal government with no compensation if it ceases to be operated as an airport

Rent payment

- Based on revenues of the not-for-profit authority
- Not linked to land area
- Not linked to regional land values

National Airport System

End of lease provisions

- Australia:
 - » land and improvements returned to Commonwealth for payment of depreciated NBV
 - » Will allow retirement of debt
- Canada
 - L&I returned to feds with
 - » No compensation
 - » No assumption of debt
 - » Facilities in 1st class condition

NAS Implications for Valuation

There is no alternative use allowed

- Neo-classic valuation is zero or undefined

NPV must consider

- Substantial remediation costs
- Depreciation must accelerate to reflect asset write off
- Need to extinguish all debt by end of lease
- Not-for-profit status
 - Any surplus of revenues or other payments (AIFs) MUST be used for capital program
 - » Essentially to extinguish debt at end of lease

NAS issues

Replacement cost

- For most, a replacement airport would be much smaller
- Original airports were constructed for low power piston aircraft
 - Land intensive triangular runway configuration
 - Replacement would have smaller land footprint

Replacement *system*

- System built for frequent emergency landings of 1930s piston aircraft
- Today, any 2+, 3+ airport region would have single airport₁₇

Airport Improvement Fees

- Airports in Canada have no access to paid in equity capital
 - In some other countries, and sectors transferred airports granted initial equity capital
- **AIFs are only for funding capital investments**
 - Contractual agreement between airports and airlines
 - » Effectively, airlines must approve capital program
 - » Airports cannot divert AIF to operating costs
 - AIFs would not exist if airports were private

Regional Local Airports

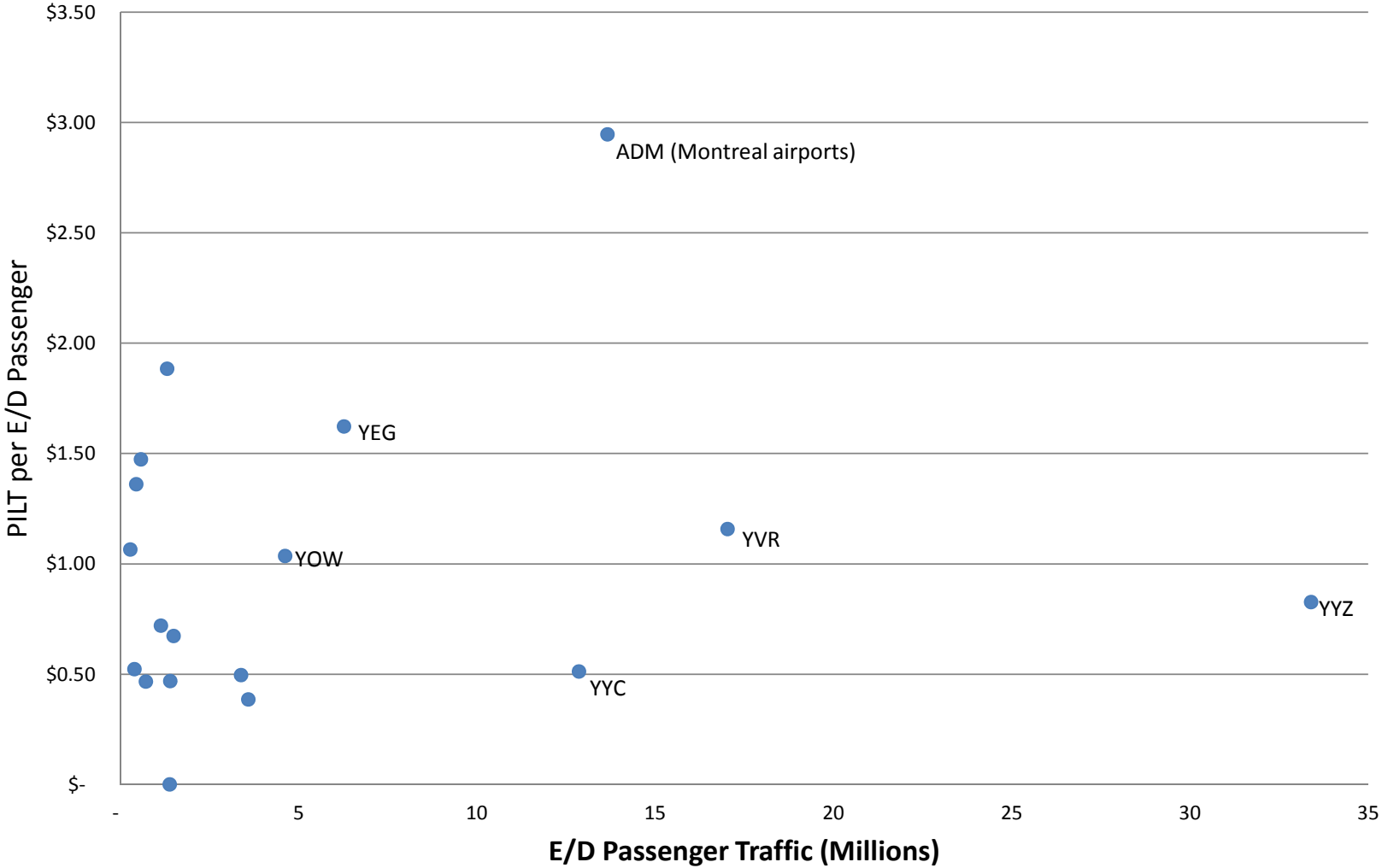
- Sold for \$10
- Sale conditions required use only as airport for 10 years
 - Crown had Right to repurchase for \$1
- Most cannot cover their capital costs without subsidy
 - *Source: Transport Canada study*
- Many cannot even cover operating costs
- Massive land footprint, a high proportion of region
 - Sale of land would result in dramatic drop in general regional land values
- Loss of airport would drive out some regional employment

General Aviation Airports

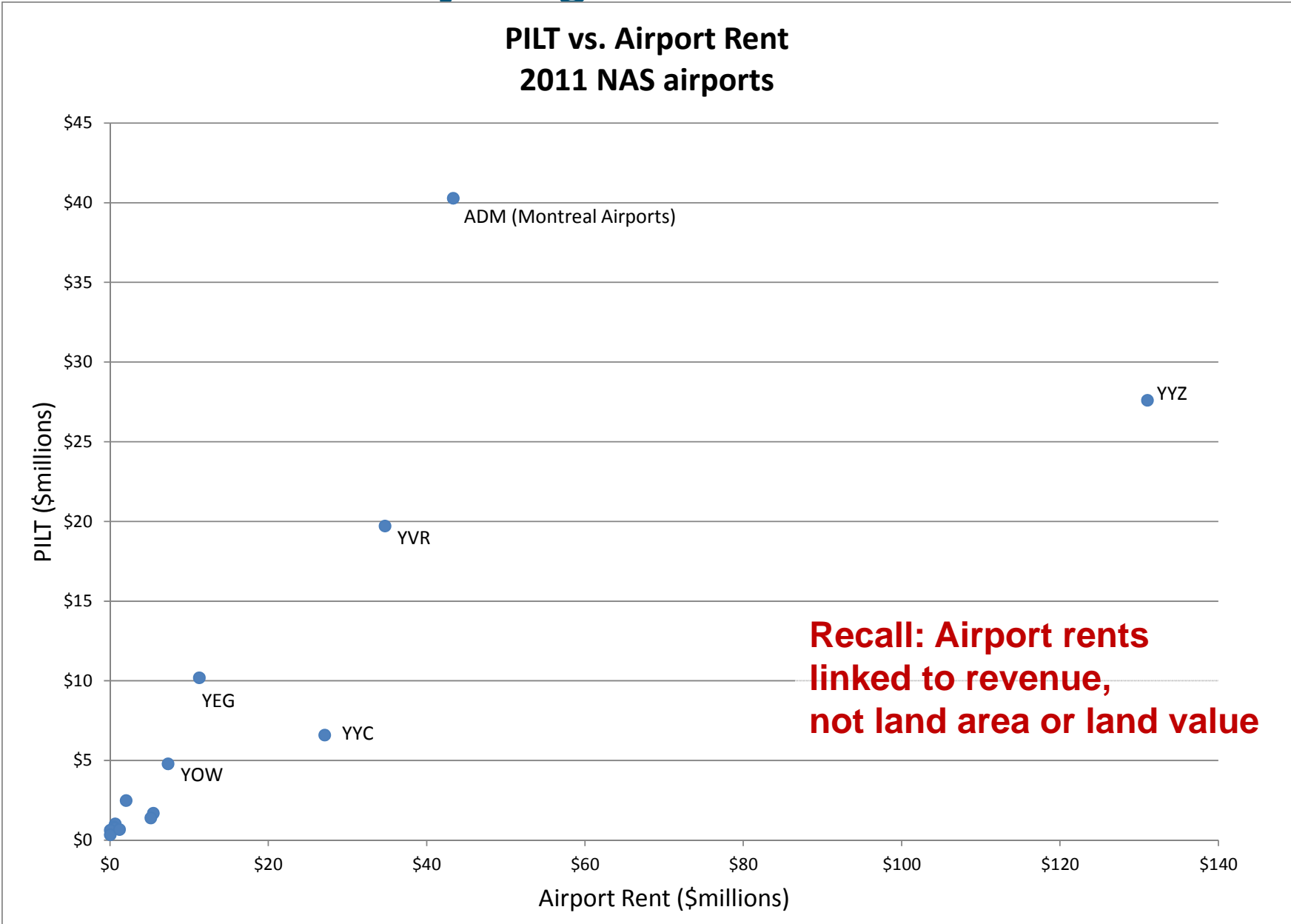
- Generally, do not have an airport use requirement
- We see these properties
 - Traded (bought and sold as airports)
 - Converted to alternate uses

Is there any logic in PILT/GILT?

**PILT per E/D Passenger
vs. E/D Passenger Traffic
2011 NAS Airports**



Is There Any Logic in PILT/GILT?



Is There Any Logic to PILT/GILT?

- There appears to be no relationship to:
 - Traffic level
 - Land area
 - General property values in the region
 - Operating contribution
 - » Revenue less expenses

Closed Airports

- Denver, Hong Kong
 - Land has substantial remediation costs
 - Land are is so massive, redeployment to alternate use is phased in over many decades
 - Almost no structures or other improvements deployed to alternate use
 - » Terminals, hangars, runways all torn down
 - » Perhaps tower preserved as a landmark of former land use

Traffic Growth at Regional Airports

- Record in US, some Canada, and Europe
 - High traffic growth may be transitory
 - » Bellingham roller coaster with various carriers current traffic jump due to Cdn government policy which could change
 - Ryanair has abandoned many airports
 - » Often due to fee disputes
- Hence projecting current traffic/revenues to future is highly problematic

Cost Basis?

- Many airport assets have limited or no value in any alternate use
 - Most terminals of closed airports are tear downs
 - Hangars are expensive and no economic alternate use
 - Runways have no meaningful alternative use

Conclusions?

- There are no comparable transactions for NAS and Regional airports
- Cost basis is highly problematic and not advised
- DCF requires great care especially in Canada's peculiar regime

Thank you!

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