ASSESSMENT vs APPRAISAL

Assessment vs Appraisal

Comparing an **appraiser** to an **assessor** is like comparing an a **accountant** to an **economist**.

Both deal in finance, but . . .

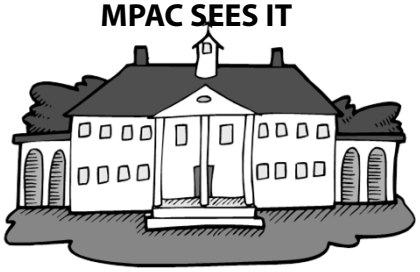
The **accountant** must perform their responsibilities with **absolute precision**

The **economist** only has to be **trending in the right direction**

MY HOUSE AS I SEE IT

MY HOUSE AS THE APPRAISER SEES IT

MY HOUSE AS MPAC SEES IT



Assessed Value vs Sale Price

- Why not use actual sale price if a property has actually sold??
  - Using all sale prices in the market area provides a statistically fairer assessment for all homes in the area
  - All similar properties MUST be valued in the same fashion
    - » *If sold properties were valued based on sale prices, how would unsold properties be valued?*

Example

Developer builds 3 identical houses in the middle of a block

18 Same Street | *20 Same Street* | *22 Same Street*

Builder gets an immediate offer for $180,000 and decides to take it in case there are no other offers

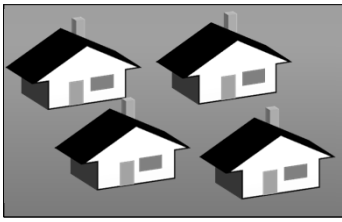
Sells for the list price of $200,000

Would it be fair if the 3 houses were paying different tax amounts?

Since it's the last house, it sparks a bidding war between 2 people and sells for $225,000

Assessment vs Appraisal

What does the appraiser do?
Values ***property***



What does the assessor do?
Values ***properties***

Reasons to Get an Appraisal

- Reasons the appraiser values property

Mortgage

Law suit

Secure a loan

Real estate negotiations

Fight an assessment

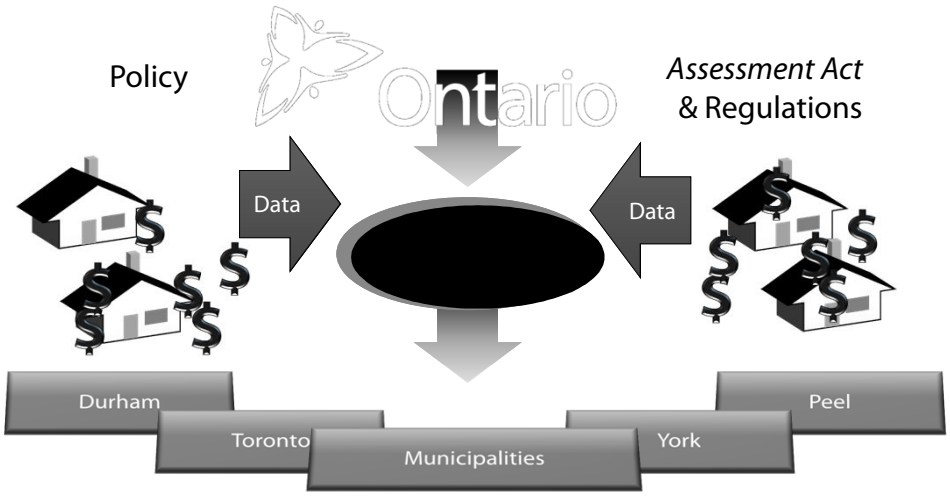
Establish insurance values

Asset calculation

Estate

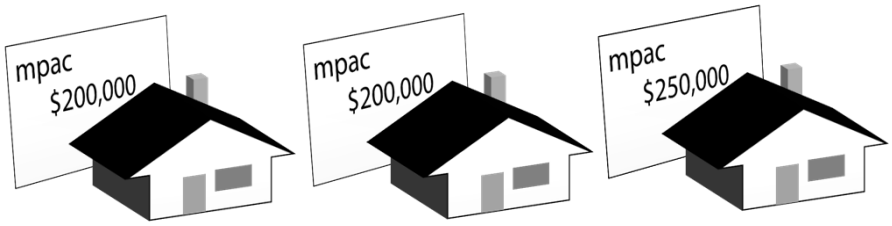
Division of Assets

Reasons for Assessment



MPAC Concerns

- Legislative directive *(not client directive)* for uniformity and accuracy



MPAC Concerns

- Same playbook used across the province

» *Fairness requires assessor in London use the same techniques as the assessor in Kingston, even if local appraisers use different techniques because of specific client needs*

MPAC Has Poor Access to Data

- Assessors can't get inside the house
- Homeowners **downplay** improvements
- They have even sometimes been known to be **less-than-honest**

Quality of Data

Client pays an appraiser to return something accurate

mpac

MPAC's data comes from building permit information, on-site inspection, registry information, questionnaires, peeking in basement windows

Quality of Data

Clients have an interest in disclosing more fully, and allowing full access.

Questionnaires are less-than-honest, building projects expand past permit, or no permit taken out

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MPAC Challenges

- MPAC won't know chattels, financing, whether sale was arm's-length or non-arm's length, etc.

MPAC Has Poor Access to Data

- The assessor knocks on the door at 11am . . .
- The lights are on, but no one's home . . .
- The assessor leaves a door hanger asking to follow up by phone . . .
- Homeowner calls, but may "forget" to mention the finished basement they are currently constructing!

GREAT MOMENTS IN ASSESSMENT

1849

- Property assessment transferred to municipalities in 1849
- Over time, each municipality developed its own assessment system and methods of valuing property

1849

- Provincial Government takes responsibility

1970

- Market value assessment offered to municipal governments on a voluntary basis

1849

- Responsibility transferred to a new not-for-profit corporation called the Ontario Property Assessment Corporation (OPAC)

1970

- First ever province-wide assessment in Ontario

1998

- Assessments updated to their current value (CVA) using a common valuation date

1849

1970

mpac

1998

2001

- **OPAC re-named Municipal Property Assessment Corporation**

WHAT IS MPAC?

Creature of Statute

- MPAC administers a uniform, province-wide property assessment system based on current value assessment in accordance with the provisions of the *Assessment Act*

Scope of Assessment

- MPAC currently assesses and classifies more than 4.8 million properties in Ontario
  - » *More than any other assessment jurisdiction in North America with an estimated total value of $1.7 trillion dollars*

Structure of MPAC

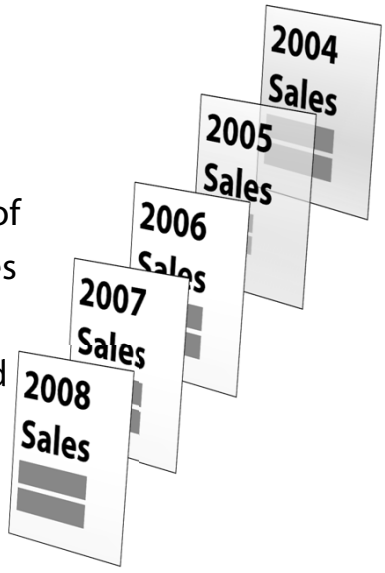
- MPAC is a non-share capital, not-for-profit corporation funded by all 444 municipalities in Ontario



WHAT DOES MPAC DO?

Process

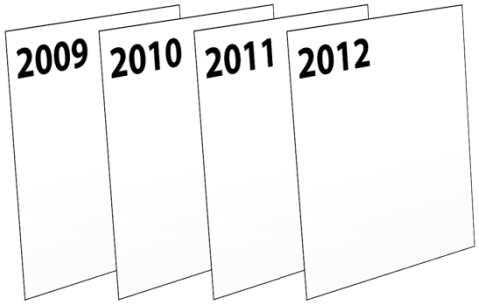
- Ontario adopted Current Value Assessment (CVA) in 1998
- Under CVA, three to five years of open-market, arm's-length sales in the market area are used to determine the current assessed value of a particular property



Valuation Date

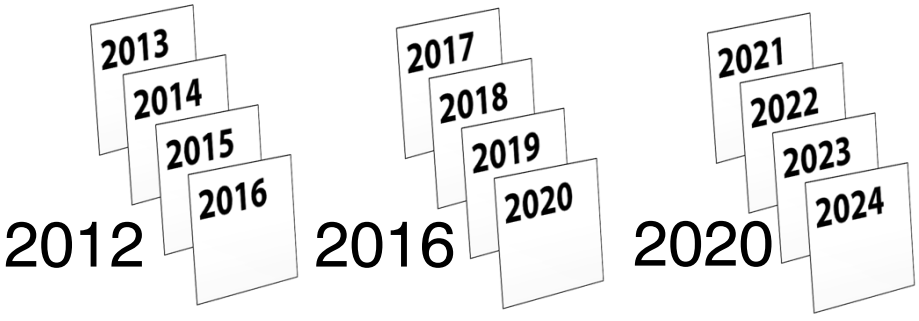
- For the taxation years 2009 to 2012, the valuation date is January 1, 2008
- The data used to generate the 2008 values was typically based on sales from 2006 to 2008

January 2008						
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		



Valuation Date

For years later than 2012, land is valued as of January 1 of the year before the next four taxation years.



Market Value

The Appraisal of Real Estate
Third Canadian Edition

Appraisal Institute of Canada
Ontario

- The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.

Market Value

- Market value reflects the collective perceptions and actions of a market—not the preconceived view or vested interest of a particular individual

Market Value

- Implicit in most market-value definitions are:
- Buyer and seller are typically motivated

Market Value

- Implicit in most market-value definitions are:
- Both parties are well informed or well advised, and acting in what they consider their best interests

Market Value

- Implicit in most market-value definitions are:
- A reasonable time is allowed for exposure in the open market

Market Value

- Implicit in most market-value definitions are:
- Payment is made in terms of cash in Canadian dollars or in terms of financial arrangements comparable thereto;

Market Value

- Implicit in most market-value definitions are:
- The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale

Current Value

From the Ontario Assessment Act
Section 1

"current value" means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm's length by a willing seller to a willing buyer

Current Value

From the Ontario Assessment Act
Section 19 (1)

The assessment of land shall be based on its current value.

Current Value in relation to Sale Price

Current Value	Sale Price
• Most probable price a property should bring in a competitive and open market under all conditions requisite to a fair sale	• Price a particular buyer and seller agree to in a particular transaction • Only provides indication of market value

Current Value

From the Ontario Assessment Act
Section 19 (2)

The Minister may make regulations, . . .

providing that the current value of eligible land be based only on current use if the land would otherwise have a higher current value because of other uses to which the land could be put

Current Value *(on appeal)*

From the Ontario Assessment Act
Section 44(3)

. . . in determining the value at which any land shall be assessed, the Assessment Review Board shall,

a) determine the current value of the land; and

b) have reference to the value at which similar lands in the vicinity are assessed and adjust the assessment of the land to make it equitable with that of similar lands in the vicinity if such an adjustment would result in a reduction of the assessment of the land

Equity Test

- The purpose of the equity test is to ensure that the municipal tax burden is shared fairly and equally among similarly situated property taxpayers

If all homes in the vicinity are assessed at or near their current values . . . equity has been achieved!

Appeals and the Equity Test

- For property-specific appeals where value is the issue, the Assessment Review Board must do two things:
    1. Establish CVA
    2. Apply the "Equity Test"

Appeals and the Equity Test

NOTE The equity test **only** applies when **value** is the issue

For example: no equity provision if property class is the issue

Appeals and the Equity Test

44(3) (b) The ARB shall have reference to the value at which similar lands in the vicinity are assessed and adjust the assessment of the land to make it equitable with that of similar lands in the vicinity if such an adjustment would result in a reduction of the assessment of the land

*The ARB has to look at similar properties in the vicinity and make adjustments to achieve equity only if such an adjustment results in a **reduction** in the assessment of land*

Appeals and the Equity Test

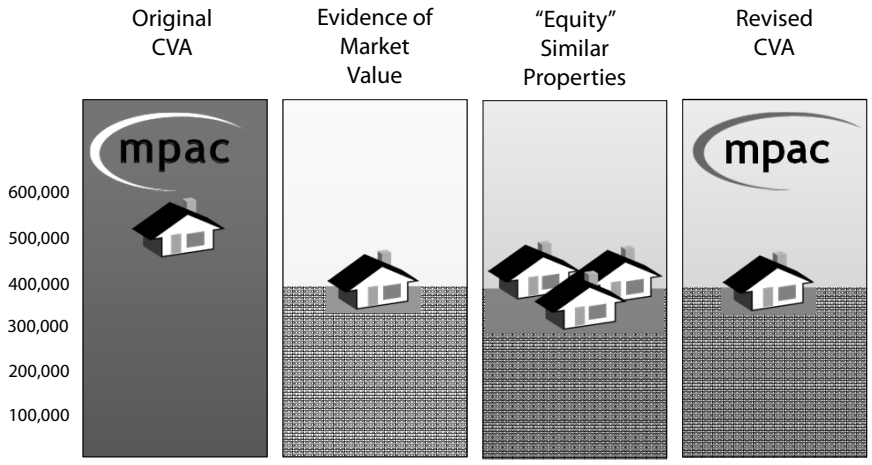
- For the taxpayer, the equity test is a form of protection
  - They may successfully argue for a reduced CVA ***solely*** on the basis that other similar properties are assessed at lower levels (regardless of market value)

The taxpayer always gets the lower of value or equity!

LET'S SEE HOW IT WORKS . . .

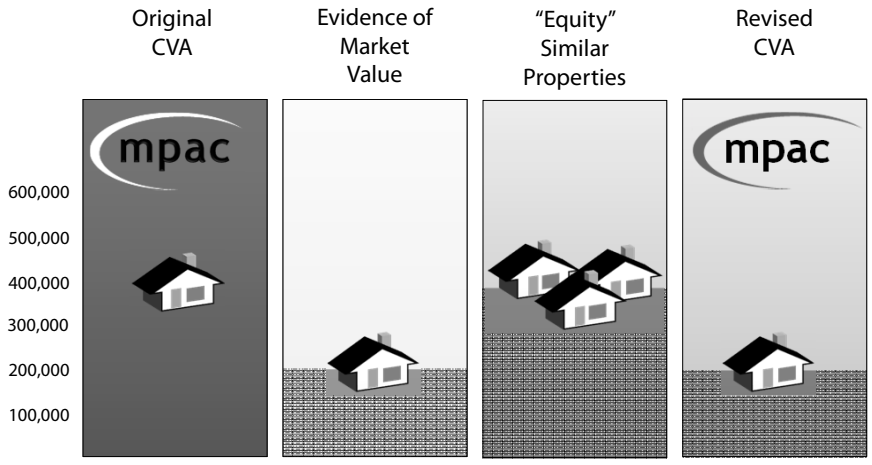
Taxpayer Scenario 1:

Taxpayer Proves CVA and Satisfies Equity



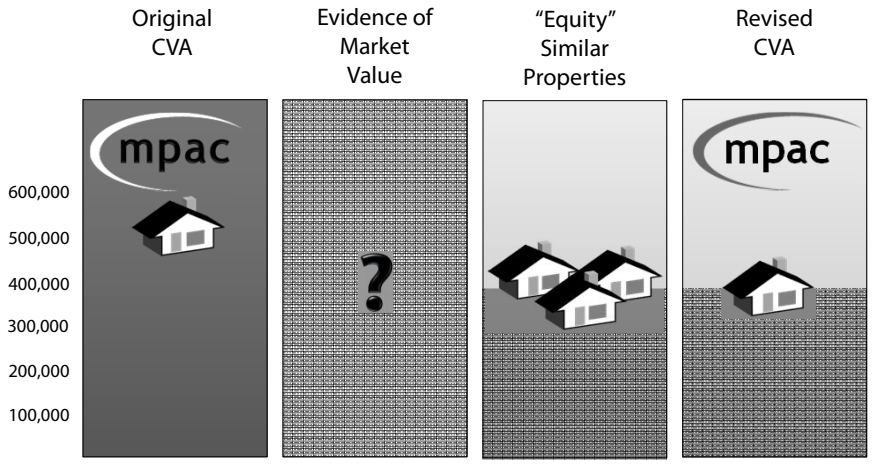
Taxpayer Scenario 2:

Taxpayer Proves CVA is lower than the Equity Test



Taxpayer Scenario 3:

Taxpayer Relies Solely on the Equity Test



Equity Can Be Enough!

- It is important to note that decreases may be sought based on equity alone, whereas increases may not
- The last example ensures that similar real property are valued similarly (even though they may be at less than current value) and as such, the taxpayer always gets the lower of equity or value

"Similar" and "Vicinity"

- The ARB can apply the "equity test" based on "similar properties" in the "vicinity"

Assessment Concept	Appraisal Concept	Same?
Similar	Comparable	Maybe yes, maybe no
Vicinity	Vicinity	No

Similar

- Same general nature, character or function
- For example, any "farm land" can be used to establish equity for a subject farm—they all share their basic general nature
- They do not become dissimilar for the equity test simply because they may differ in appearance or in the uses to which they are put

Similar

- The equity test is based on final assessment values
  - For example, value per square foot is offside
- This allows the ARB and courts to permit more latitude in similarity criteria when applying the equity test compared to the market value test

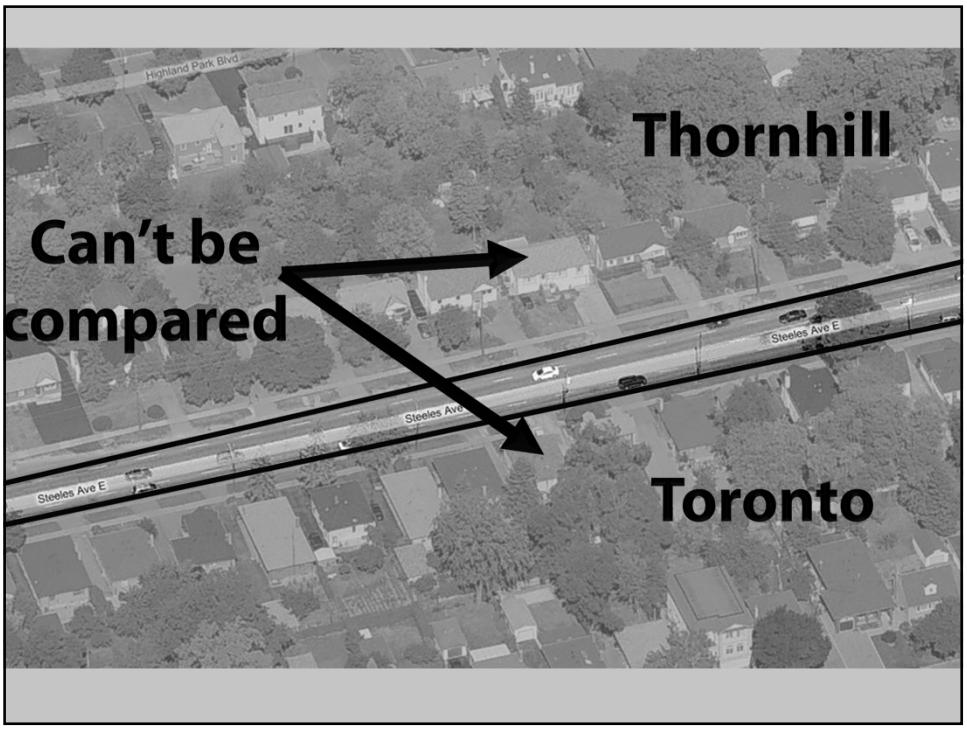
Vicinity

- As in general appraisal theory, closer is better!
- Expand the area only as you need to

Vicinity

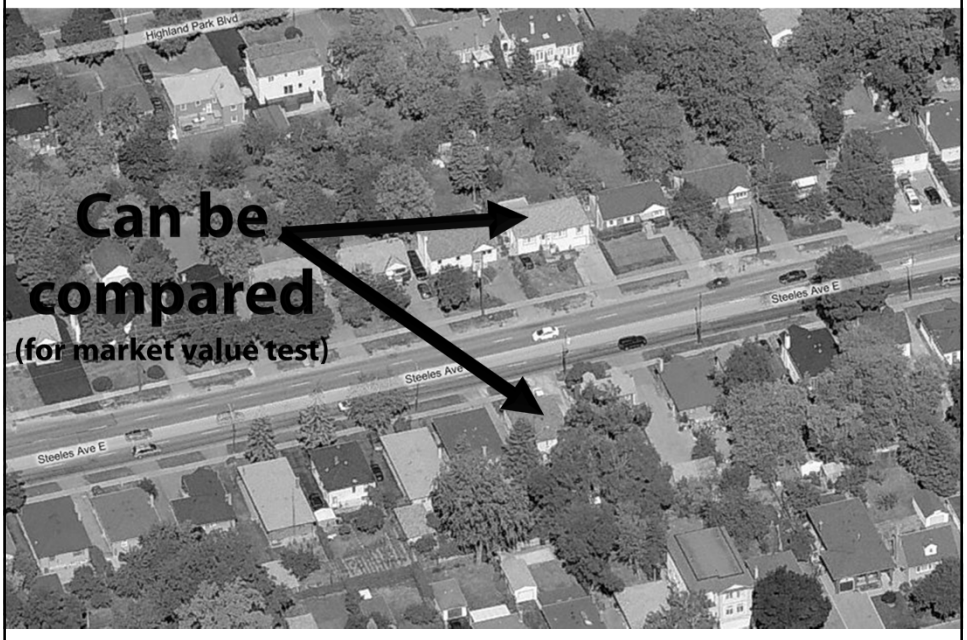
- In applying the equity test, similar properties must be in the same municipality
- "Equity" means sharing the tax burden equitably
  - » once you leave the municipality, you are no longer establishing equity

44(3) (b) The ARB shall have reference to the value at which similar lands in the vicinity are assessed and adjust the assessment of the land to make it ***equitable with that of similar lands in the vicinity*** *if such an adjustment would result in a reduction of the assessment of the land*



Vicinity

NOTE In applying the *market value test*, vicinity may expand beyond municipal boundaries



Principal Measure of Equity

- Assessment to Sales Ratios (ASR)

ASR = CVA ÷ Sale Price

- It remains the gold standard in establishing equity
- A median ASR for a given vicinity between 0.95 and 1.05 means equity has been achieved

Onus

- Up to MPAC to show correctness of current value
- Assessed person has to establish equity
  - » *MPAC responsible for providing data on CVAs of similar properties*

MASS APPRAISAL
VS
SINGLE PROPERTY

Appraisers should recognize the differences between statistical processes in the collection of data and should be able to distinguish between descriptive and inferential statistics.

Without an understanding of these issues, any use of statistical calculations is dangerous or ill-advised.

—The Appraisal of Real Estate,
Third Canadian Edition,
Appraisal Institute of Canada

Mass Appraisal

- MA = Systematic approach and uniform application of appraisal methods and techniques to obtain estimates of value that allow for statistical review and analysis
- MRA = Multiple regression analysis, a statistical tool used to enable mass appraisal
- CAMA = Computer assisted mass appraisal

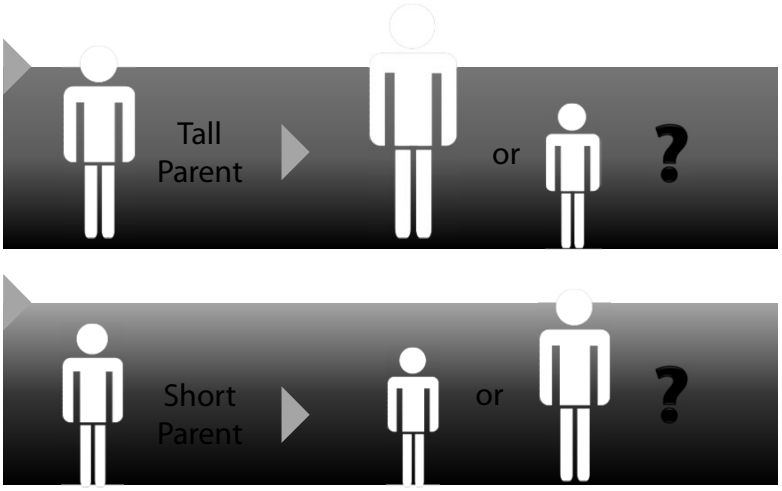
Mass Appraisal

- Multiple regression analysis is a **TOOL**
  - It is not a methodology like DCA, income or cost
- CAMA = computer assisted mass appraisal
  - Note: the **A** means **assisted**, not **generated**
- They **do not** replace appraisal judgment

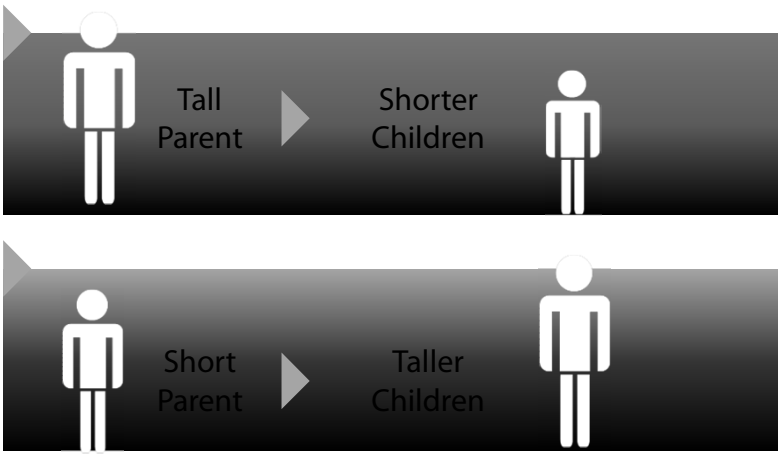
History of Regression

- Francis Galton created regression analysis in 1885 when he attempted to predict a person's height based on the height of his or her parent

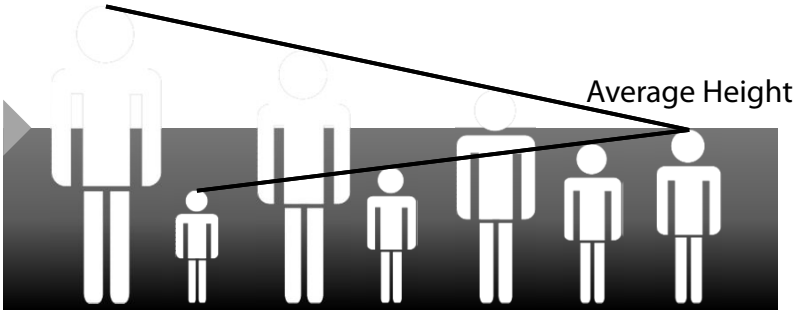
Heights of Parents and Children



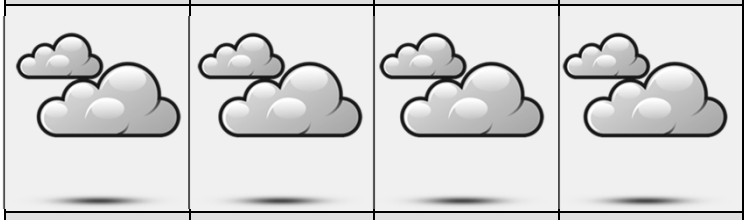
Heights of Parents and Children



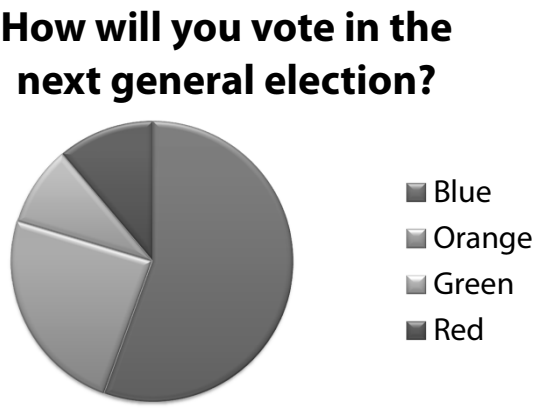
Children *Regress* to Average



Typical Uses

Aberdeen			
Today	Tomorrow	Monday	Tuesday
			
7°	7°	7°	7°

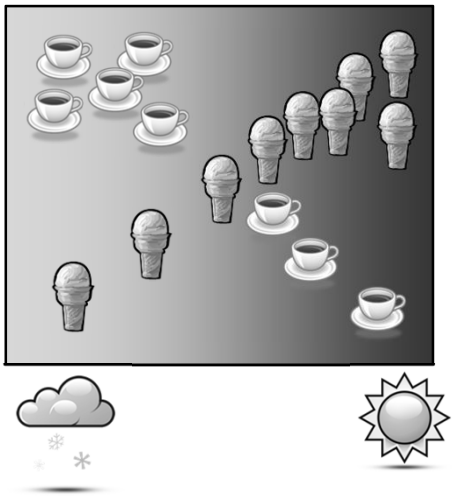
Typical Uses



Typical Uses

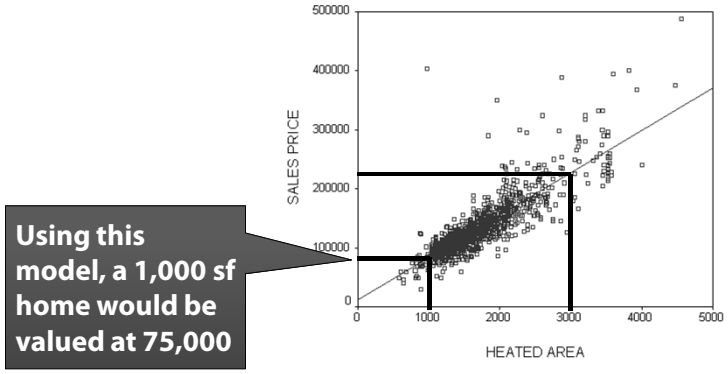
Simple Regression

- Basic idea behind regression is that two things are connected to each other
- By knowing one, you can predict the other



Simple Regression

- Tell me the square footage, and I can tell you the sale price?

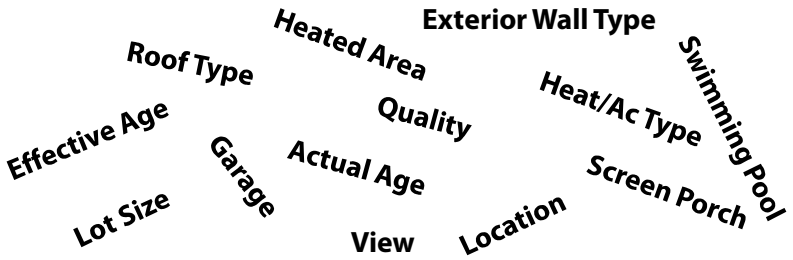


Simple Regression

- But, if square footage is the only variable, then homes of the same size are treated equally

Just One Input?

- Square footage is important, but other factors contribute
- Seriously, what *doesn't* contribute?



Extending Simple "Best Line Fit"

- When you know the relationship is complex, with many values making a contribution, multiple regression might be able to help out
- Why "might be able to help"?
  - It's just a model
  - It's just mathematics
  - It still needs appraisal judgment

But It's Pretty Darned Good

- For any given methodology, with ample data to draw from, MRA will always produce the statistically best assessment

"The Board finds that the direct sales comparison approach to value using MRA is the most appropriate way to develop assessment values"

Rick Stephenson, Vice-Chair, ARB
Irons, Ashforth and Welch v. OPAC, Region 17 and the Township of Muskoka Lakes (1999)

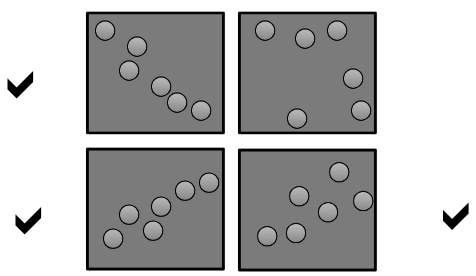
Building an MRA Model for CVA

- MPAC is given the task of figuring out CVAs for all the properties of Ontario
- It has to account for significant factors that reasonably, consistently contribute to value

HOW IT WORKS

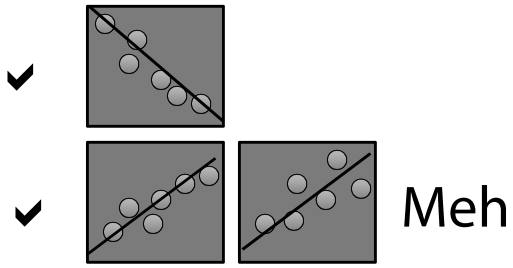
Pinpoint Possible Relationships

- For each variable, compare it to CVA
- You're looking for some straight-line fit, but it doesn't have to be perfect



But Is It Significant?

- Can I draw a straight line through the data?
- Do I hit all the dots (which would be perfect!) or are some left out?
- Note: Real estate data is never perfect

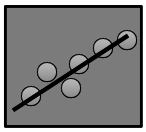
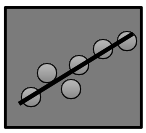
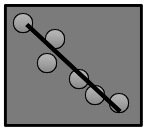


Multicolinearity

- "A statistical phenomenon in which two or more variables in a multiple regression model are highly correlated"
- Meaning, there is a strong linear relationship among the variables themselves, not just the variables and CVA

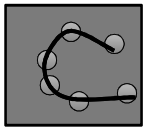
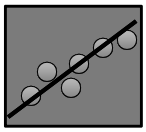
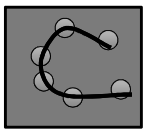
Multicolinearity

- Check CVA against individual factors

Plug in:		*To get:*
Sq. Ft.		CVA
No. of Bedrooms		CVA
Age		CVA

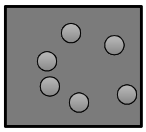
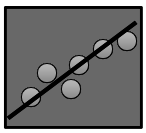
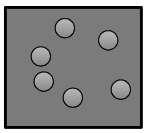
Multicolinearity

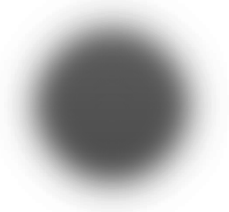
- Check the factors against each other

Plug in:		*To get:*
Sq. Ft.		Age
Sq. Ft.		No. of Bedrooms
Age		No. of Bedrooms

Multicolinearity

- Are we measuring the same thing twice?

Plug in:		*To get:*
✔ Sq. Ft.		Age
✘ Sq. Ft.		No. of Bedrooms
✔ Age		No. of Bedrooms

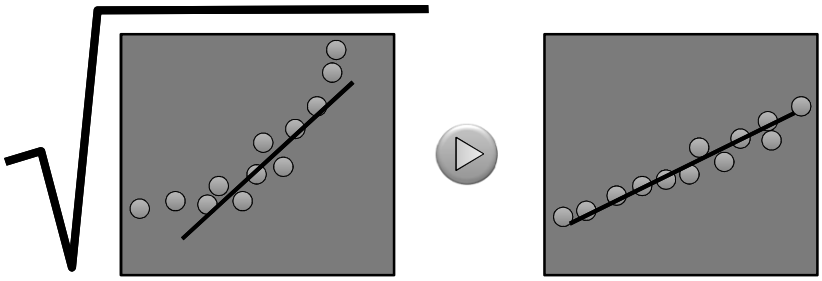


SEE IF IT STICKS

mpac

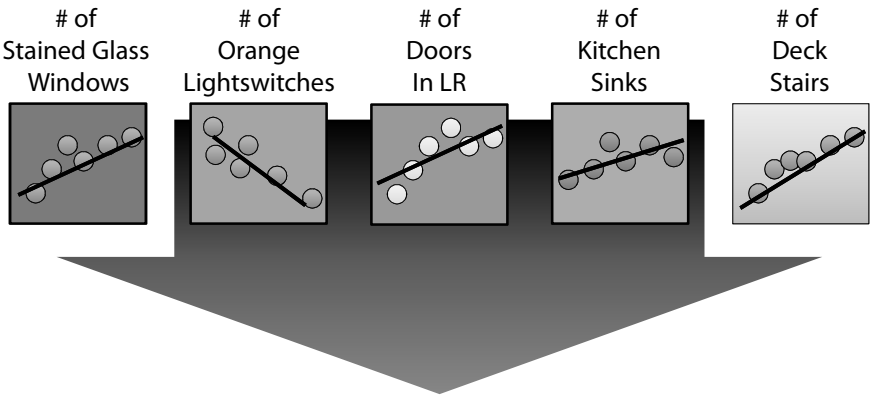
PROPERTY ASSESSMENT DETAIL REPORT		
DESCRIPTION	**SUBJECT**	**VALUE**
BASE VALUE	1.00	86,934
SQUARE ROOT OF LOT SIZE	79.48	30,532
STRUCTURE #1 – SFD		
FIRST FLOOR AREA	1,259.00	75,716
SECOND FLOOR AREA	1,088.00	48,078
BASEMENT	1,088.00	18,593
FINISHED BASEMENT	540.00	2,289
AGE (DEPRECIATION)	1984.00	-18,588
AIR CONDITIONING	1.00	5,281
BATHS	2.50	13,473
STRUCTURE #2 – ATTACHED GARAGE		
GARAGE SPACES	2.00	19,952
TOTAL ROUNDED VALUE		**282,000**

Straightening data



- Some mathematical manipulation is OK
- Square root (who knew?) is a typical one

LET'S PUT IT ALL TOGETHER



$$CVA = b_0 + b_1 \blacksquare + b_2 \blacksquare + b_3 \blacksquare + b_4 \blacksquare + b_5 \blacksquare$$

Where b_1 = value of 1 stained glass window

Where b_2 = value of 1 orange lightswitch

Where b_3 = value of 1 door in living room

Where b_4 = value of 1 kitchen sink

Where b_5 = value of 1 deck stair

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PROPERTY ASSESSMENT DETAIL REPORT		
DESCRIPTION	SUBJECT	VALUE
BASE VALUE	1.00	86,934
SQUARE ROOT OF LOT SIZE	79.48	30,532
STRUCTURE #1 – SFD		
FIRST FLOOR AREA	1,259.00	75,716
SECOND FLOOR AREA	1,088.00	48,078
BASEMENT	1,088.00	18,593
FINISHED BASEMENT	540.00	2,289
AGE (DEPRECIATION)	1984.00	-18,588
AIR CONDITIONING	1.00	5,281
BATHS	2.50	13,473
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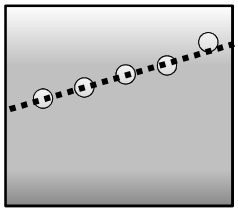
TOTAL ROUNDED VALUE		282,000

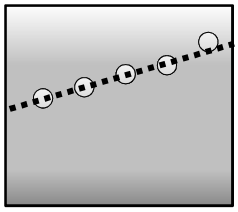
Brew ha, ha! Sales

b_0 

$y = b_0 + b_1$[redacted]

Beer Sales = \$500 + (\$200 × Number of Goals)

What is b_0?

b_0 

- Beer sales are driven by more than just Leaf goals
- But I don't know, can't measure, don't need to know where those base sales are coming from

What is b_0?

- There will always be some value that's unaffected by the other factors (b_0)
- The constant represents the unexplained value that is not included in the model
- In a real-estate assessment model, it can bundle up quite a bit of market information

mpac

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