Canadian
Gas Association

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BASIC ACCOUNTING CONCEPTS

CANADIAN GAS ASSOCIATION

REGULATORY COURSE

PREPARED

BY

ASHER DRORY & ASSOCIATES LIMITED

-MANAGEMENT CONSULTIANTS-

ACCOUNTING

OUTLINE OF TOPICS

- Objectives of Financial Statements
- The Balance Sheet
- The Income Statement
- The Cash Flow Statement
- Appendix A: Balance Sheet Definitions
- Appendix B: Generally Accepted Accounting Principles

OBJECTIVES OF FINANCIAL STATEMENTS

- To provide information on the resources of the firm and its obligations (balance sheet)
- To identify the firm's operation performance (income statement)
- To identify how the firm obtains and uses cash (statement of changes in cash flow/changes in financial position)
- To explain how to interpret the firm's specific financial statements (auditor's opinion on notes to the financial statements)
- To assist in determining the effectiveness of management
- To improve the quality of investment (I), operating (O), and financing (F) decisions

Appendix A:
Balance Sheet Definitions

CANADIAN GAS ASSOCIATION
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BALANCE SHEET CONCEPTS

- The Balance Sheet (B/S) is an *snapshot* of the firm's resources and obligations at a point in time
- Resources are what the firm **owns,** and are formally called "assets" (A)
- Obligations are what the firm **owes** other parties, and come in two forms:
  - What the firm owes by way of debt (contractual obligations) "liabilities" (L)
  - What the firm owes to the owners of the firm called shareholders equity (E) or owners equity (O/E)
- Accountants set up a double entry bookkeeping system so that at any point in time assets always equal liabilities plus owners' equity, i.e.

A=L+O/E

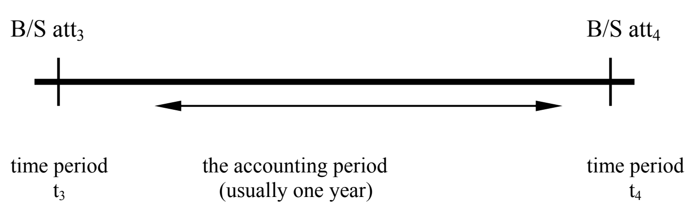
STRUCTURE OF THE BALANCE SHEET

a snapshot at a point in time

d
u
r
a
t
i
o
n

ASSETS	LIABIITIES + EQUITY
Short term Assets Long Term Assets	Short term Liabilities Long term Liabilities
Total assets =	Equity Total Liabilities + Equity

Balance Sheet (B/S) is recorded at a point in time



DEFINATION OF ASSETS

- Assets are resources owned by the firm and available to produce future benefits.

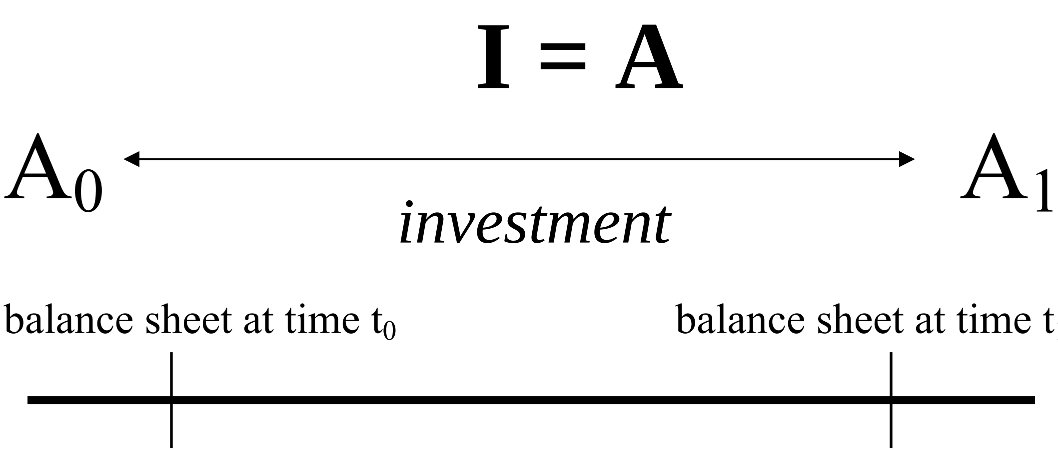
- Assets are a stock of resources, hence **unexpired expenditures.**

- The left hand side of the balance sheet reflects past investments and assets are usually recorded at original acquisition cost.

- Investments in a time period are the net change in assets.

- Let I=A_{to} = asset at time t=0, and A_t =assets at time t=1.

- Then I=A_{t1} - A_{to}, i.e., investment in a given period is the net change in assets from the beginning of the period to the end of the period and (represents change in variable xxx). Investment can be negative.



DEFINITION OF LIABILITIES

- Liabilities are claims to the firm’s resources.

- Liabilities indicate how much the firm owes to outsiders.

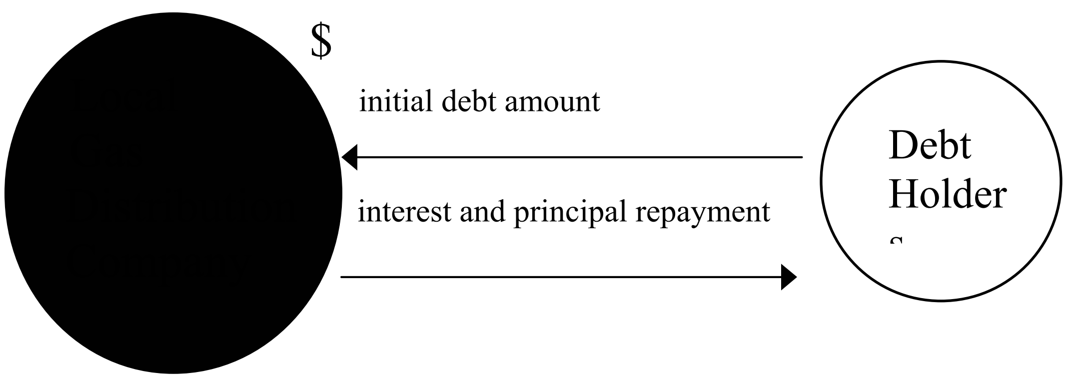
- They are contractual obligations to transfer resources to a third party at a specified date and at a specified amount.

  - e.g. debt requires **future cash outflows** for interest payments and principal repayments or insolvency occurs

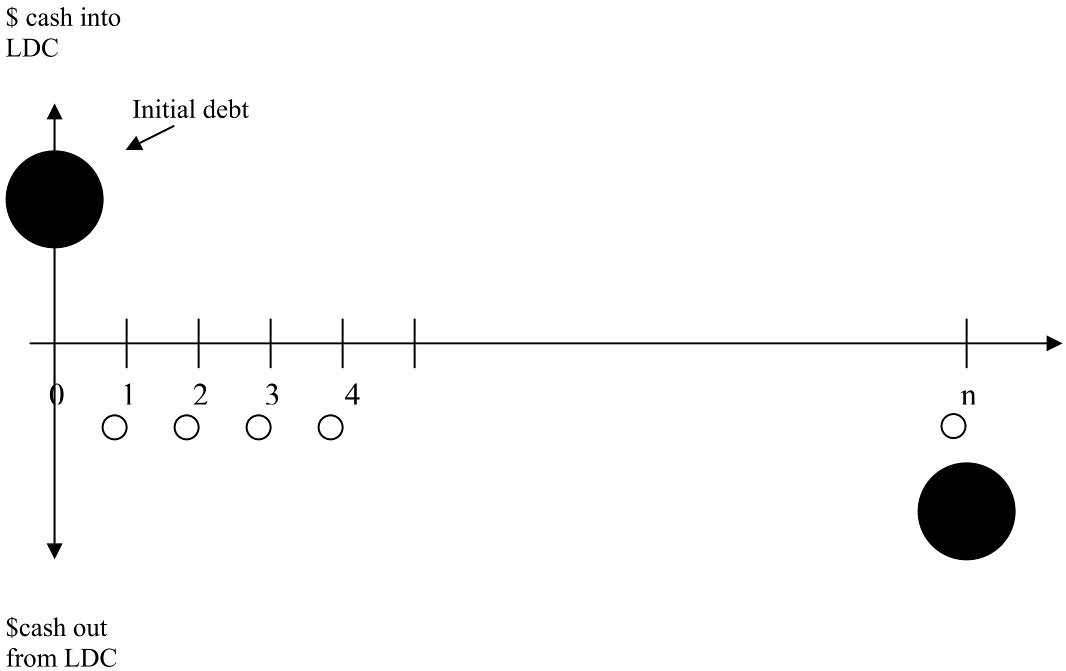
- The event that caused the obligation occurred in the past.

- Liabilities are composed of short-term payables and debt obligations and long-term debt financing obligations.

- Liabilities are generally recorded at original acquisition cost.



- From a cash flow perspective, liability obligations have distinct time patterns as noted below.

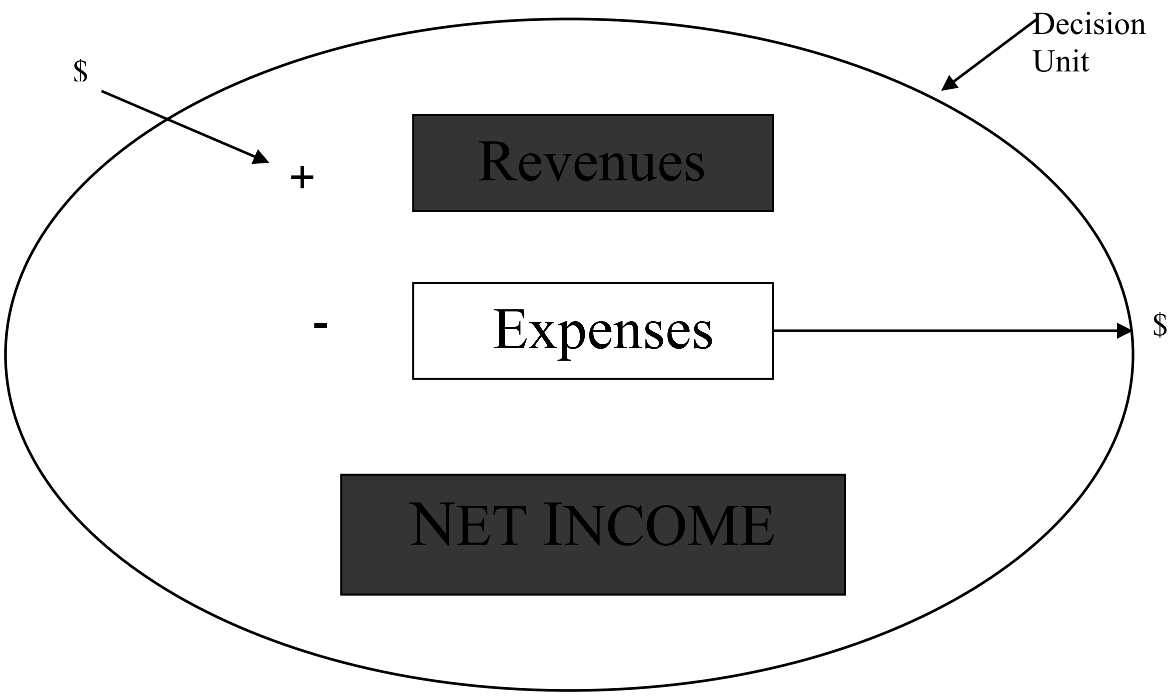


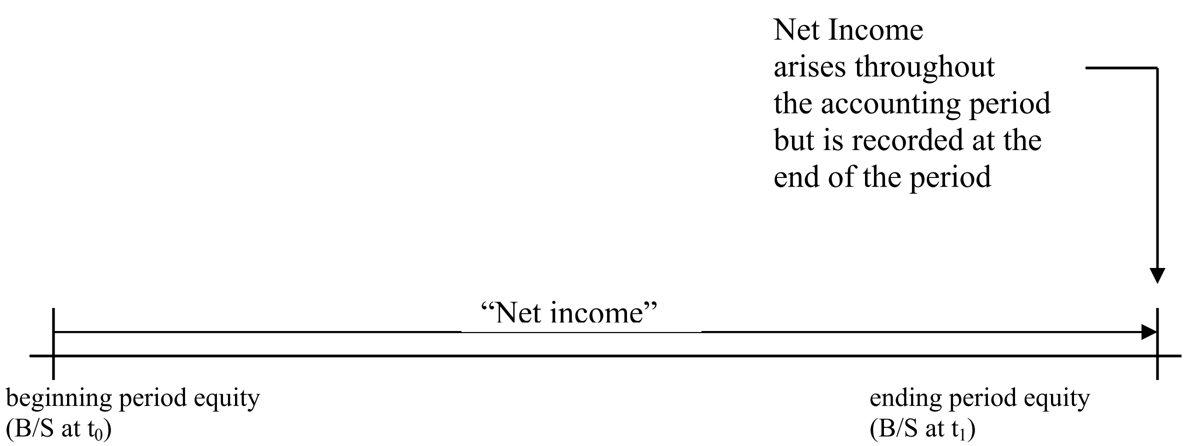
DEFINITION OF EQUITY

- The claims of owners to the assets of the firm are called "equity".
- Equity is also what is left over {i.e. **residual**} after discharging all outside claims so E = A – L {i.e., equity is equal to assets – liabilities}
- The value of Equity represents the residual ownership interest in the firm.
- Equity is a source of financing just like debt, but the source comes from those who invested in the firm's equity.
- Thus, the right hand side of the balance sheet indicates what is owed in total, and tells how the firm has financed itself.

THE INCOME STATEMENT

- The income statement recognizes revenues when services are preformed.
- The income statement attempts to match expenses with associated revenues in a given period based on the notion of the matching principle. (see – GAAP #4 Appendix B)
- Expenses are period cost, i.e. costs considered appropriate for performance evaluation purposes to be matched to the period.
- Net income is recorded at the end of the accounting period.
- If net income is positive, management appears to have done well.
- **Net income** includes many non-cash items, such as depreciation, and thus **does not represent the cash flow of the firm.**
- As net income is what remains after deducting all appropriate period costs (operating costs, depreciation, administration costs, interest expense, taxes), it is the amount available for distribution to the owners of the company. It is an **equity account.**


Decision Unit
$
+
Revenues
-
Expenses
$
NET INCOME


Net Income arises throughout the accounting period but is recorded at the end of the period
"Net income"
beginning period equity (B/S at t_0)
ending period equity (B/S at t_1)

THE CONCEPT OF DEPRECIATION

- The income statement reports a measure of managerial performance in a given period.
- Revenues of the period will be recorded when earned.
- As long-term assets are incurred to provide benefits in future time periods, they contain significant un-expired resources.
- The total cash costs of acquiring the fixed asset cannot be recorded as the expense attributable to the use of the fixed asset in a given accounting period.
- The appropriately matched asset utilization costs for the accounting period reflective of the effort incurred to earn the revenue is known as **depreciation**.
  - For example: Consider a $100 million distribution plant. If it is to last 30 years, straight-line depreciation would divide the total cost of the plant by the number of years so that the depreciation expenses in any given year's income statement is $3.3 million per year (i.e. $100 million/30)
- There are many different methods of depreciating assets, such as straight line, declining balance, double declining balance, and sum of years digits.
- Historic studies of actual use of plants (Iowa curves) can be used to estimate depreciation.
- The sum of the all the depreciation is a subtraction from the original purchase cost of the asset providing an estimate of remaining "book" value of the asset, i.e.

  Net Book Value (NBV) = Original Fixed Asset Cost – Accumulated Depreciation

RELATIONSHIP BETWEEN INCOME STATEMENT AND BALANCE SHEET

Balance Sheet

Assets at end of period = Liabilities + Equity

Equity at end of period = contributed capital + Retained Earnings

Retained Earnings at end of period = retained earnings at beginning of period + Net income dividends

Income Statement

Net Income = R - CGS - GMA - Depn - Int - T

gross operating margin

Earnings before interest and taxes (EBIT)

Earnings before taxes (EBT)

Net income (NI)

NI = Earnings after tax (EAT) = (EBIT – Int)(1-Tx)

Where
R is revenues
CGS is cost of goods sold
GMA is general, maintenance, and administration
Depn is depreciation expense
Int is interest expense
T is taxes (Tax rate x taxable income)

DIV = Dividends declared They are cash flows to existing equity shareholders and can only be paid out if there is cash on hand, preferred share Dividends have not been omitted, they do not exceed balance sheet retained earnings, and any restrictive bond covenants are met. Equity shareholders can also get cash from sale of equity.

THE CASH FLOW STATEMENT

- Cash flow accounting records cost as they are transacted with no use made of the matching principle.

- The cash flow statement categorizes cash flows into three types of transactions:

  - Operating Cash Flow

    - Are operating revenues form sales of goods and services less operating expenses incurred in running the business

  - Investing Cash Flows

    - Are cash expenditures for purchases of long term assets less cash receipts obtained from the sale of any long term assets

  - Financing Cash Flow

    - Are cash flows incurred to discharge interest obligations and principal repayments or cash outflows for preferences or common share dividends net of any cash inflows from insurance of new debt, new preferred shares of new common stock

- As a mechanism for reporting managerial performance, cash flow accounting has two disadvantages:

  - The reporting of the quality of management's performance for one period is co-mingled with the performance of preceding or succeeding periods.

  - Cash flow accounting postpones the time period when revenue is recognized e.g.,

    - Supposed sale is made in July and the customer pays in February of the following year: Under flow accounting, the revenue is recorded in February of the next year, while under GAAP accounting it is recorded when it is earned, in this case in July of the current year.

STRUCTURE OF THE CASH FLOW STATEMENT

	Year
Operation Cash Flow	
Receipts	
Cash Expenses	
Purchases	
Wages	
Rent	
Licenses	
Taxes	
Net Operating Cash Flow	
Investing Cash Flows	
New building	
Land	
Equipment	
Net Investment and Operating Cash Flows	
Financing Cash Flows – Commitments	
Interest payments on existing debt	
Dividends on common	
Lease payments	
Net Financing Requirements	
{if negative raise debt or equity}	
New debt issuance	
New equity	

ASSET TYPES

Current Assets

- Cash & Marketable securities
  - Cash is the most liquid resource.
  - Used to acquire other resources.
  - Held to ensure any obligation that comes due can be discharged.
  - Valued on the B/S at its face value.
  - Marketable securities (interest earning) are recorded at lower of cost or market.
- Accounts receivable (A/R)
  - Sales made by the firm on credit are A/R.
  - It is an "asset" since the firm expects to receive cash sometime in the near future.
  - It is riskier than cash as the customer may be a dead beat or pay very late.
  - Outstanding A/R at the end of the accounting period is the B/S value.
  - It is recorded at face value net of an allowance for doubtful accounts.
- Inventory and Pre-paid expenses
  - Inventory
    - Resources on hand which are short term in duration and are used in operations.
    - These items may be stock piled for convenience (and that is their "future" benefit).

- Pre-paid expenses
    - Resources that will be consumed in the accounting period.
    - Paid for in advance.
    - Examples: prepaid insurance, workmen's compensation, licenses, and business tax.

Long Term Assets

- Are resources that will provide benefits over long future time periods.
    - Provide capacity to create value.
    - Illiquid and hard to transfer into cash when required.
    - Often are of a specialized use making demand limited if there is a distress sale.
- Valuation of Long Term Assets on balance sheet
    - Recorded at original acquisition cost.
    - Cost of asset utilization is shown as depreciation.
    - Depreciation is accumulated and shown on the balance sheet as a negative offset to the asset value.

LIABILITY TYPES

Current Liabilities

- Accounts Payable
  - Obligations of the firm for purchases of goods & services on credit
- Wages, Salaries payables
  - Payroll taxes, employee benefits payable to employees who have earned them, but not yet paid
- Notes payable
  - Current obligations to banks and others who have provided debt capital to the firm
  - Interest expense is usually paid in a lump sum at maturity.
- Income taxes payable
  - Current obligations for income taxes

Long Term Liabilities

- Mortgages, leases, notes, and bonds are long term debt capital used to fund operations on a permanent basis
  - Interest expense is usually paid at regular intervals over the term of the long-term debt, and principal is often re-paid periodically (e.g. mortgages payments combine interest with principal repayments).
  - Debt is often provided only on security of underlying assets, with ownership of assets transferring to creditor on non-payment (default).
  - Unsecured debt (debentures) is only provided to the best credits by banks.

- Preferred shares have many features of debt and are usually evaluated as debt.

- Deferred Taxes

  - The selection of method of tax and financial reporting is up to management.

  - The total amount of revenue or expense will be the same over time, thus the "timing" of tax payments may differ.

    - e.g. Tax depreciation may not equal financial reporting depreciation.

    - Timing differences cause tax deferrals and they are recorded as a liability owing to the government.

<u>Equity Types</u>

- Capital contributions

  - Share certificates are given to equity investors of the firm who make capital contributions.

- Retained earnings

  - The accumulation of earnings in the on-going operations of the firm which have not been distributed as dividends back to the equity investors

RATIONALE FOR GENERALLY ACCEPTED ACCOUNTING PRINCIPLES

- Managers want a "periodic" measure of income, which reflects a notion of "earnings".
- "Accounting" income is the difference between revenues and expenses calculated using the "accrual" concept.
- Accountants use their own rules or language called Generally Accepted Accounting Principles (GAAP).
- GAAP was developed to improve management and investor decision-making.
- The Canadian Institute of Chartered Accountants (CICA) is the official financial statement codifier.
- GAAP makes a set of assumptions.

GAAP-ASSUMPTIONS

- Financial statements are prepared for the firm not for the owners (Business Entity).
- The firm is assumed to continue operations onto the foreseeable future (Going Concern).
- Accounting deals with events, which can be measured in monetary terms (Monetary).
- Managers and investors need information on a periodic basis (Accounting Period).

THERE ARE ELEVEN GAAP

1. CONSISTENCY

- Similar transactions should be reported in a consistent fashion from period to period.

2. HISTORICAL COST

- Transactions are normally measured in terms of "actual" prices/costs incurred.

3. REALIZATION

- Revenue is "realized" when the service or good is exchanged for a valued consideration.

or

- Revenue is realized when the amount of revenue can be verified objectively.

4. MATCHING OF COSTS AND REVENUES

- "Accounting Income: (Net Income = NI) is the net result of related costs and revenues of the "period".
- NI=Revenues less Expenses {shown on the Income Statement}
- The intent is to measure the efforts of accomplishments.

5. DUAL ASPECT

- Someone has a claim on all the resources of the firm.
- Resources are called "assets".
- Claims of creditors are called "liabilities".
- Claims of owners are called "equity".
- Assets=Liabilities + Equity {shown on the Balance Sheet}

6. RELIABILITY OF EVIDENCE

- Presumes that decisions should be based on information that is objectively measurable.

7. DISCLOSURE

- Accounting reports should not “mislead” and hence disclose all relevant information.

8. CONSERVATISM

- When choosing amongst reporting options, accountants should give added weight to conservative measurements.

9. MATERIALITY

- Accounting conventions only apply to “material” and “significant” items and events.

10. SUBSTANCE OVER FORM

- Accounting must recognize the substances of economic activities even if legal treatment may suggest a different treatment.

11. APPLICATION

- Application of GAAP is left up to the judgment of management and accountants.

THE ROLE OF EXTERNAL AUDITORS

- Public companies sell equity on the open market and are regulated by government securities agencies such as the US Securities Exchange Commission and the Ontario Securities Commission.
- Regulators require audit opinions, and most banks require it for private companies for debt issuance.
- Almost all publicly owned businesses offer "audited" financial reports.
- Audit opinions are reports of legally bound accountants (Chartered Accountants) who express professional opinions on the fairness of financial statements prepared by management.
- The external audit offers the investing public independence and competence.

THE EXTERNAL AUDIT

- External auditors use the variety of techniques to examine the financial statements.
- External audits are comprised of four activities
    - Internal analysis of records of major transactions on a statistical basis
    - Inspection of resources
    - External communication with vendors, creditors, and customers
    - Analytical assessment and review

THE EXTERNAL AUDIT OPINION

- ❑ Addressed to directors and shareholders
  - ■ States the scope of examination and who was responsible for the statements
  - ■ Indicates the basis of the audit procedures
  - ■ Identifies if the statements are prepared according to GAAP
  - ■ Expresses an audit opinion as to "fairness" of the firm's financial position

TYPES OF AUDIT OPINIONS

- ❑ Most audit opinions are "unqualified" and clean.
- ❑ Three types of qualified opinions:

1. Qualified as to fair presentation and noted by the phrase "subject to".
2. Qualified as to application of accounting principles and noted by phrase "except for".
3. Material qualification – very serious problems and vary rare-noted by "disclaimer of opinion" or "adverse opinion".