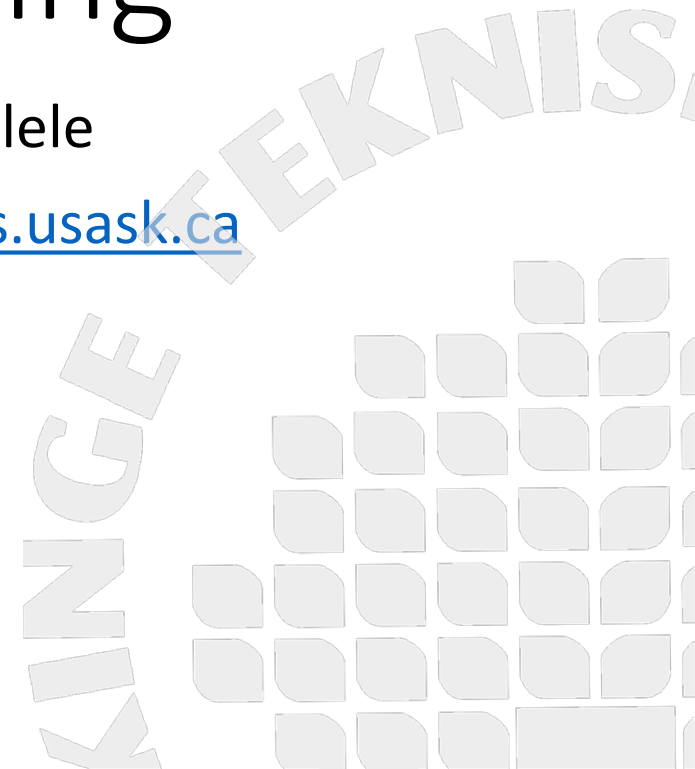# On the use of Financial Valuation Techniques in Requirements Engineering

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What is this paper about

- This paper investigates methods and techniques from finance for supporting value estimation for features or requirements.

- The challenges associated with applying financial techniques for feature value estimation and for supporting requirements prioritization.

- (1) Use Present Value and Cash Flow calculations, as typically applied by financial analysists performing value-based analyses, as input to requirements prioritization, cost-benefit analyses and triage efforts.

- (2) PV and Future Cash Flows

Present Value and Future Value

- Can we predict future revenues accruing to a specific feature (set)? If so, we can use NPV as input to the decision-making process.

PV = FV$*(1+r)^{-n}$

- PV is the Present Value, FV is the expected (or required) Future Value, r is the expected (or required) rate of return per investment period and n is the number of periods over which the investment is held

E =$CF_1(1+r)^1+CF_2(1+r)^2+CF_3(1+r)^3+...+CF_n(1+r)^n$

- where E is the company value (or project value), $CF_1,CF_2...CF_n$ are forecasted future cash flows in year 1, 2...n respectively, and r is the rate of return required by the shareholders

Commentary: The presence of the required information is a measure of business maturity: what are customers willing to pay for / what customer data can be monetized?

A Financial Basis for Management Decisions

- A given feature (set) is an investment, can we justify that investment?
- PV (and other techniques) can assist with management decisions
- Even if there is no projected revenue information, at least thinking about revenue points out that these factors may not have been considered
- RE practitioner does not necessarily have to be the one to do the calculations. But, the RE practitioner can ensure that these factors are considered (perhaps as part of V&V efforts)

Questions?
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