Credit Risk – How the Landscape Changed

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Outline

- Introductory Remarks
- How the Stage was Set for a Credit Crisis
- Why Canadian Banks Performed Relatively Well
- How Scotiabank Managed Through the Crisis
- Current Risk Outlook
- Key Lessons Learned
- Concluding Remarks

Introductory Remarks

Holy Trinity of Credit: Trust, Judgment & Discipline

- Trust:
  - "Credit" comes from Latin: "to trust or believe"
  - Fundamentally, credit markets are built on trust
- Judgment:
  - Regardless of models and/or financial analysis, good credit decisions are based on sound judgment
  - Market forces (i.e., greed, pressure for growth etc.) can interfere with judgment
- Discipline:
  - Credit markets are cyclical – like all other investments, credit decisions require discipline through the cycle

How the Stage was Set for a Credit Crisis

An Insatiable Demand for More Yield

A dangerous & steady increase in risk appetite

- Low interest environment rate post 9-11 drove investors to:
  - Alternative investments in search of yield
  - Leveraged loans, away from traditional bonds
  - Un/under-regulated “shadow banking” system
- Unusually low default rates post-2002 provided historically low Probability of Default in portfolio models
- Disintermediation led to deals being structured directly between institutional investors & corporate borrowers:
  - High yield bonds
  - Term loan B

Too Much Liquidity…

Massive demand re-wrote market practices

- At their peak in 2006-07, CDO’s/CLO’s were absorbing more than $10 bn. <u>per month</u>
- Re-investment pressure and “easy institutional money” created supply/demand imbalances and drove lax credit practices:
  - 6x-8x multiples for LBO’s
  - Second lien debt (even silent seconds!)
  - Payment-in-Kind toggle subordinated debt
  - Covenant lite, with equity cures

Lax Regulation Drove Fundamental Changes

U.S. banks dramatically changed their approach

- Traditional, built-in disciplines of the commercial lending, agent-bank model were abandoned:
  - From “buy & hold” to “originate & distribute”
  - Up-front fees often exceeded final hold levels
  - US gorillas set the tone (BofA, JP Morgan Chase and Citi accounted for more than 50% of deal flow…)
- Most egregious examples occurred in US sub-prime:
  - White hot demand driven by housing bubble
  - Massive disintermediation through mortgage brokers
  - Compounded through securitizations & 3rd party-ratings
  - Total breakdown in underwriting, at it’s worst: NINJA’s!

Tell-Tale Signs of an Impending Credit Crisis

We should’ve known we were in trouble when…

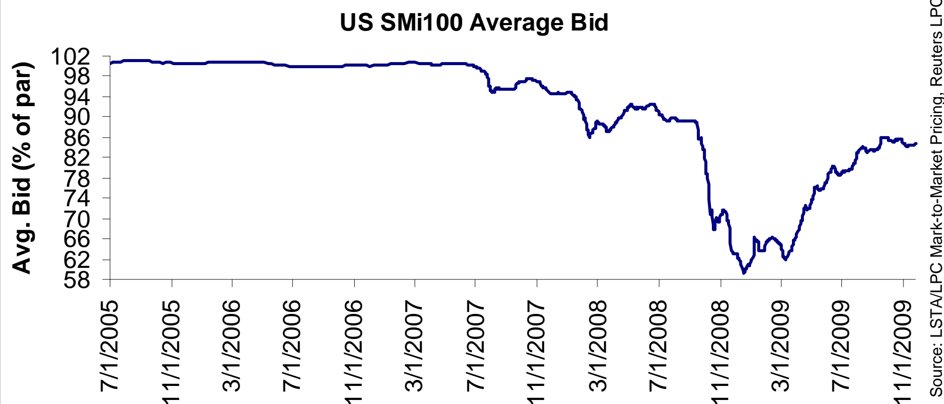
- Portfolio models calculated PD as “nominal”!
- “Innovative” structuring created AAA tranches from single B credits!
- Rating agencies stopped asking tough questions on structured deals!
- Mortgage brokers were earning Wall St. bonuses!
- Investors stopped doing their own due diligence!
- A migrant strawberry picker in California got 100% financing to buy a $750k home!

Definitive Signs of the Credit Crisis

We knew we were in trouble when…

- US monetary policy moved +400 bps from 2004 - 2006
- Losses on US sub-prime skyrocketed (estimates in July 2007 ranged from $100 bn - $300 bn)
- Rating agencies and institutional investors realized that their highly-rated securitizations were not, in fact, default-proof
- "Cash is king" trumped the more traditional "flight to quality"
- Visibility on underlying assets became extremely limited – in Canada, this triggered the ABCP crisis

Impact on Widely Held Corporate Loans



Source: LSTA/LPC Mark-to-Market Pricing, Reuters LPC

Casualties of the Credit Crisis

Some of the many dominos that began to fall…

- 2007:
  – Northern Rock
  – Fannie Mae & Freddie Mac
- 2008:
  – Countrywide
  – Bear Stearns
  – Lehman Brothers
  – AIG
  – Washington Mutual
  – Wachovia
  – Merrill Lynch

Why Canadian Banks Performed Relatively Well

Why Canadian Banks Performed Well

Widespread regard for Canada's banks

- Key endorsements of Canada's banks
  - World Economic Forum
  - International Monetary Fund
  - Moody's + S&P
  - G20
- Driven, in part, by a strong regulatory framework
  - More conservative leverage & capital ratios
  - Oversight by a single regulator for banks & investment banks
  - Bank-owned investment dealers for 20+ years
  - More prudent approach (i.e., insured mortgage program)

Underlying Differences

Cultural & business model differences

- Prudent risk management
- Effective risk governance
- Relatively more conservative risk appetite:
  - Bias in favour of relationship lending vs. transactions
  - Significantly less use of securitization
- More balanced business model: mix of banking vs. trading

Mortgages Differences: A "Prime" Example

In Canada:

- Major banks have 60%+ market share
- Assets are primarily on Balance Sheet
- Insurance (LTV >80%) stays for term
- Minimal sub-prime lending by banks
- Mortgage interest is not deductible
- Borrowers are generally less leveraged

In the US:

- Brokers generate 70%+ of mortgages
- Significantly higher rate of securitization
- Insurance stops once LTV ≤80%
- Sub-prime hit 20% in 2006
- Mortgage interest is deductible
- Borrowers are generally more leveraged

How Scotiabank Managed Through the Crisis

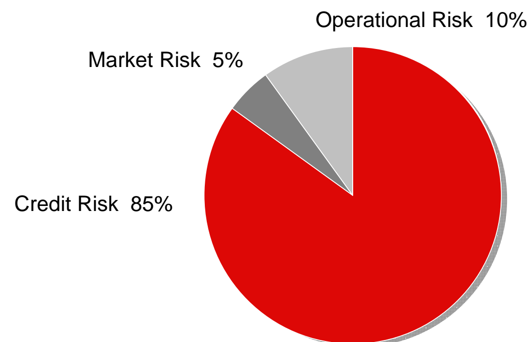
Scotiabank's Approach to Managing Risk

Overview

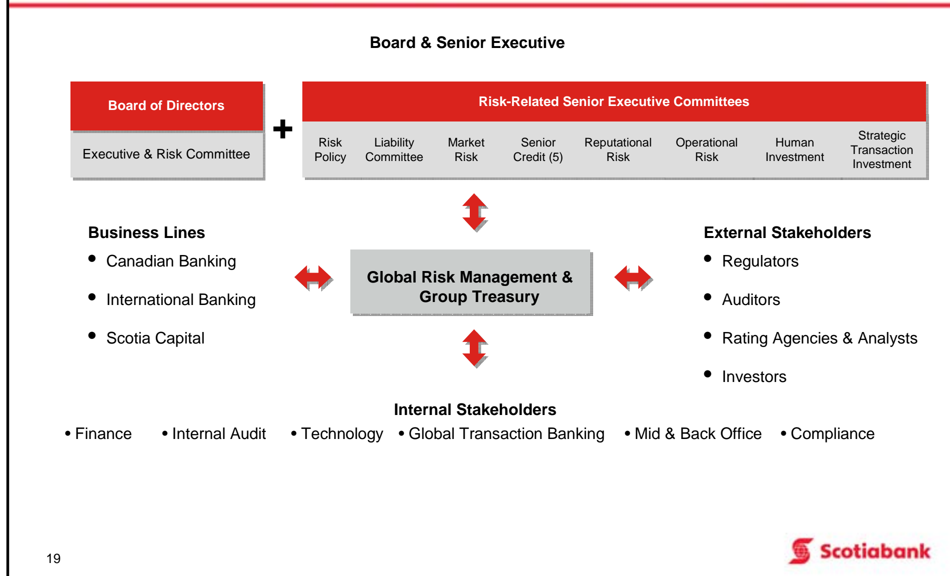
- Context
- Effective risk governance
- Strong risk management culture
- Effective diversification
- Anticipating/responding to the Credit Crisis
- Recent enhancements

Context: Primarily a Credit Risk Bank

Regulatory capital at Oct. 31, 2009



Risk Governance Does Matter



Strong Risk Management Culture

"Robust & pervasive"

- Critically important and a top priority at Scotiabank
- Core principles:
  - Business units are primarily responsible for risk
  - Large, independent, central risk group
  - Centralized policies, limit-setting and key approvals
  - Enterprise-wide view of risk
- Other distinguishing characteristics:
  - Risk function reports directly to President & CEO
  - Significant influence within Executive Management
  - Active involvement by Board & Senior Management

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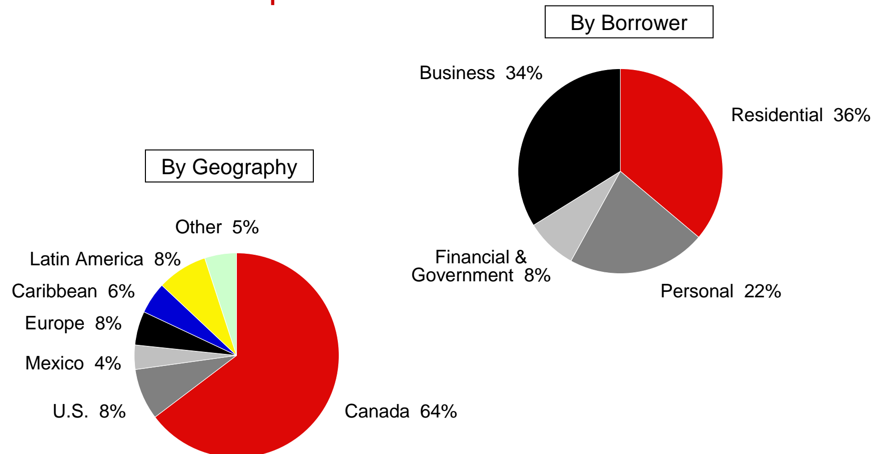
Effective Diversification

Loans & acceptances - 2009



Anticipating the Credit Crisis

Specific changes made after 2001-2002:

- We started preparing for the current downturn in 2001-2002
- Specific changes we made included:
  - Revising best practices based on 25 largest loan losses
  - Developing more robust industry reviews and limits
  - Tightening & refining single name exposure limits
  - Beefing up due diligence procedures
  - Increasing early warning monitoring based on market data and company-specific results
  - Adding the discipline of Loan Portfolio Management to look at all-Bank/multi-product return vs. hurdle rate

Anticipating the Credit Crisis

Broad business model adjustments

- Refined business model to better reflect our risk appetite
- Affirmed our commitment to “buy & hold” (vs. “pump & dump”)
- Focused on higher quality, multi-product corporate relationships
- Pulled back from leveraged loan market due to imbalanced risk/reward
- Significantly increased overall lending mix in favour of retail, where loss rates are much lower

Anticipating the Credit Crisis

Broad portfolio adjustments

- Increased proportion of secured lending
- Increased emphasis on mortgage lending
- Reduced exposure to US lending
- Reduced involvement in leveraged lending
- Reduced corporate & commercial share of total portfolio
- Increased proportion of investment-grade loans
- Made industry-sector adjustments (i.e., forestry, real estate & automotive)

More Diversified & Secured Portfolio

RETAIL	1990	2009	Improvement?
% of Total Portfolio	37%	58%	✓
Mortgages (%)	54%	74%	✓
Secured (%)	83%	92%	✓

WHOLESALE	1999	2009	Improvement?
% of Total Portfolio	56%	42%	✓
United States (%)	16%	7%	✓
Corporate Loans: % Investment Grade	50%	71%	✓

Some Evolving Best Practices…

Stress testing

- We developed more robust & extensive stress testing for a range of business and risk issues
- We enhanced several key areas, including:
  - Liquidity risk
  - Ad hoc/targeted scenarios
  - Enterprise-wide stress testing
- We leverage enterprise-wide stress testing to:
  - Engage senior management and Board of Directors
  - Align key processes: budgeting, capital management, liquidity planning & corporate strategy

Some Evolving Best Practices…

Risk appetite

- Scotiabank's risk appetite was already well-defined:
  - Well-understood at Board & Executive Management
  - Supported by robust & pervasive risk culture
  - Mature & comprehensive framework for limits, measuring & monitoring key risks
- Recently, we broadened our "Risk Appetite Framework":
  - Added key qualitative considerations to quantitative metrics
  - Now incorporates Risk Principles, Governing Financial Objectives & Strategic Principles

Some Evolving Best Practices…

Liquidity & funding

- Liquidity has been a key focus of various "best practices" studies
- New global standards for liquidity requirements are imminent
- Scotiabank bolstered our already strong liquidity position
- In addition, we took a more proactive and diversified approach to funding

Current Risk Outlook

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Current Risk Outlook

"Partly cloudy with chance of thunderstorms"

- Global economies are recovering – albeit growth is slower and more fragile than had been hoped for
- De-leveraging (↑ savings) is here for the foreseeable future
- Risk premiums are shrinking as some players return to the game
- Regulatory uncertainty will continue – until new rules for capital, liquidity & compensation are codified
- New regulatory roles & responsibilities will emerge over time (systemic risk, macro-prudential regulation, College of Supervisors etc.)

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Implications for Financial Institutions

Adapting to the “new normal”

- Loan losses will be elevated for the next 1-2 quarters due to high unemployment & commercial restructurings
- Slower asset growth
- Lower interest rates for the foreseeable future
- Impact of new capital regimes on ROE (i.e., higher capital ratios, less off-balance sheet)

Key Lessons Learned

Back to basics for assessing credit

- Do your own due diligence & financial analysis
- Don’t rely fully on external ratings or models
- Do robust stress testing on companies, industries & portfolios
- Generally avoid “structuring” (usually a sign of less transparency)
- Trust the time-honoured “5 C’s of Credit”: Character, Capacity, Capital, Collateral & Conditions

Key Lessons Learned

Back to basics for risk management generally

- Don't finance long term assets with short term funding
- Make sure you can manage, measure and monitor the risks you are taking
- Be clear on your risk appetite and operate within it
- Resist short-term profitability pressure – manage shareholder interests over the long term

Concluding Remarks

- Was this once-in-a-lifetime perfect storm or the financial equivalent of global warming?
- New macro-challenges (global inter-connectedness, super-power imbalances, financial innovation) are here to stay
- Some differing views:
  - "That which does not kill us makes us stronger" (Nietzsche)
  - "Those who do not learn from history are doomed to repeat it" (Santayana)
  - "History is merely a list of surprises – it can only prepare us to be surprised again" (Vonnegut)
  - "Now more than ever, you need prudent risk management and sound credit fundamentals" (Hart)