Energy Market Update:
Focus on Exchange-Traded Funds

June 2011

Jim Joyce
Tim Simard

NATIONAL BANK
FINANCIAL GROUP

NBC Commodities

- 14-person Calgary-based team focused on client-driven risk management activity
  - Concentration on energy to serve our Canadian oil and gas producer clients
  - Largest lender to the small cap O&G producer community in Canada
  - Collective team experience in excess of 250 years in the field of energy trading and risk management
- Largest trader of financial energy derivatives among Canadian banks
  - For last 12 months, top-10 rank in NYMEX natural gas volume and top-20 rank in NYMEX crude oil volume
  - Average total daily futures volume traded by National Bank Financial over past 12 months:
    - NYMEX WTI 1350 contracts, NYMEX NG 4,050 contracts
  - strategic trading activities undertaken largely to support client-driven business
    - Total desk value-at-risk limited to $2.5 MM
    - Q1 2011 average daily VAR usage - $0.8 MM (Goldman Sachs $37 MM, JPM $13 MM)
- NBC Commodities trading desk selected by Horizons BetaPro in 2007 to provide the underlying hedges to their suite of commodity ETFs listed on Canadian equity exchanges
  - NYMEX WTI crude and natural gas, COMEX gold, silver and later copper
  - Long and short ETFs, single leverage and 2X leverage
  - Peak Assets Under Management for largest ETFs:
    - HOU (2X leverage oil bull) $0.67 billion, HNU (2X leverage nat gas bull) $1.05 billion
- Embryonic coverage effort of institutional investors with respect to direct commodity structures, but as yet no traction (outside of ETF-related activity)
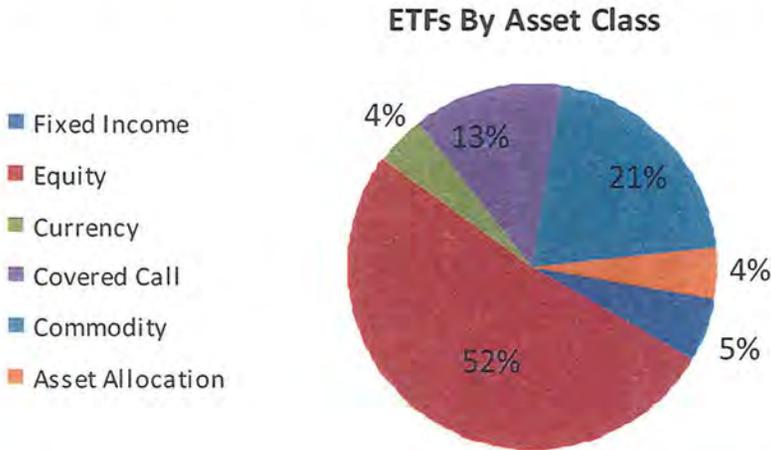 - No passive index activity on behalf of clients to-date

Jim Joyce and Tim Simard

- Co-heads of NBC Commodities
  - Jim Joyce – head trader, (including ETF execution activity)
  - Tim Simard – client coverage
- Both have over 20 years' experience specifically in the field of energy risk management
- 1995 -2005: co-founded RiskAdvisory, independent energy risk management consulting firm that provided advisory services to over 200 energy clients in the US, Canada and New Zealand
- Expert witness experience in regulatory hearings pertaining to energy risk management practices:
  - Jim Joyce
    - Regis du Quebec – Gaz Metropolitain
    - Nevada PUC – Sierra Pacific, Nevada Power
    - FERC – Sierra Pacific
  - Tim Simard
    - Idaho PUC – Idaho Power
    - Ontario Energy Board – Consumers Gas/Enbridge (twice)
    - Nova Scotia Utility and Review Board – Nova Scotia Power
    - Manitoba Public Utilities Commission – Centra Manitoba/ Manitoba Hydro
    - Alberta Energy and Utilities Board – ATCO Gas

National Bank Financial and ETFs

- NBF's role as structurer and Market Maker for ETFs has allowed it to gain expertise across all asset classes. These asset classes include:

  - **Equity ETFs**
  - **Commodity ETFs**
  - **Fixed Income ETFs**
  - **Currency ETFs**
  - **Asset Allocation ETFs**
  - **Hedge Fund ETFs**
  - **Covered Call ETFs**
    - Recently assigned Designated Broker on 4 AlphaPro and 4 XTF Capital covered call funds

- NBF is designated broker for 91 listed ETFs, touching each major asset class, as illustrated below:

ETFs By Asset Class

Legend:
- Fixed Income
- Equity
- Currency
- Covered Call
- Commodity
- Asset Allocation

Pie chart values: 4%, 13%, 21%, 4%, 5%, 52%

National Bank Financial and ETFs

- NBF is the market leader acting as Designated Broker and Registered Trader for 40% of the ETFs listed in Canada

- As Designated Broker/RT, NBF has provided seed capital and maintained minimum spreads for over 70 Canadian ETFs.

|	Designated Broker	Market Share
NBF	91	40.1%
BMO	86	37.9%
TD	24	10.6%
RBC	22	9.7%
Louis Dreyfus	2	0.9%
First Energy	1	0.4%
GMP	1	0.4%
Total	227	100%

Designated Brokers for Canadian ETFs
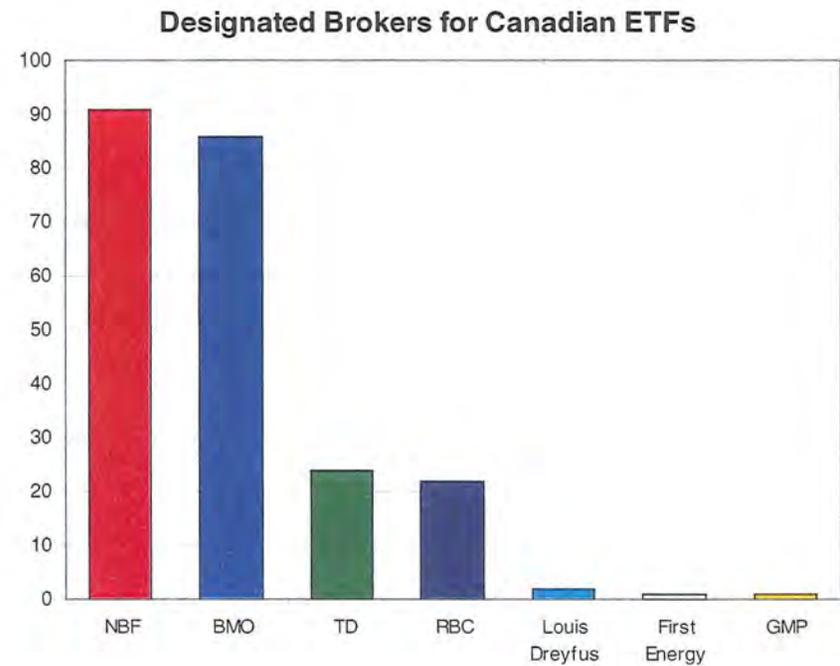
General Thoughts on CFTC Rule Changes

- Fully supportive of most of the initiatives:
  - Centralized clearing
  - Swaps repository
  - More open disclosure
  - Spot month limits
- Encouraged by the clearing exemption for end users
  - None of our producer clients are required to post margin
    - Credit comfort from the "right-way hedging" argument
  - Many clients would abandon their prudent risk management programs should they be required to post margin
- Major concern: inclusion of ETF futures hedge positions in position limit calculations either for ETF managers or their intermediaries
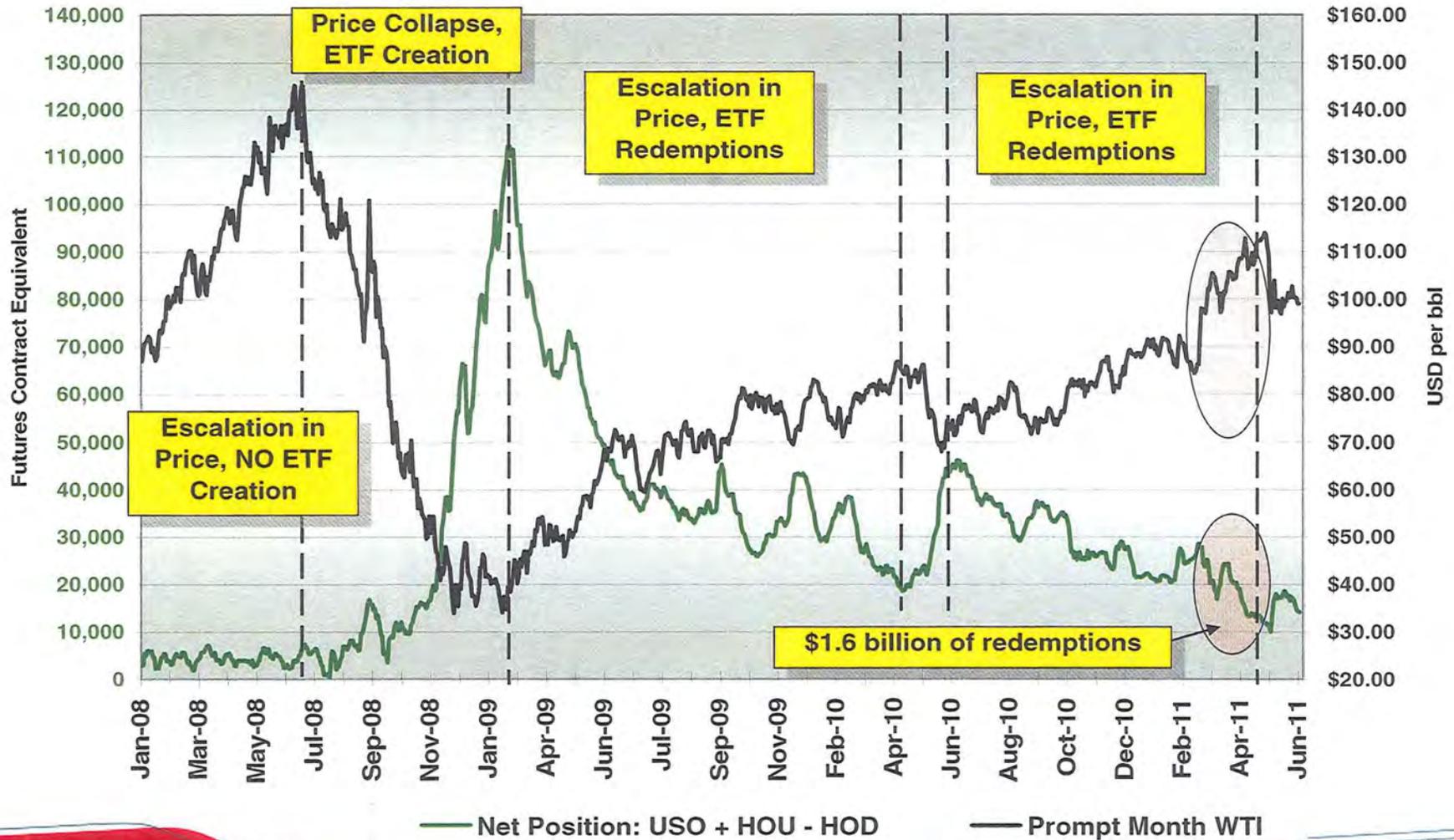
Why Should ETF Positions Be Excluded from Position Limit Calculations?

- Historical evidence in energy shows clearly that ETF participants have served to reduce price volatility rather than exacerbate market volatility
- ETFs are an amalgamation of many investors rather than a single concentrated position
    - The concept of an exchange microcosm
- ETF mechanism results in fully-margined positions for most investors
- Willingness on the part of ETF managers to disclose the positions of large participants in their funds
    - These positions can then be amalgamated with participants' other positions to assess their overall position versus regulatory limits
- ETF participants in the energy markets have been providing important liquidity to commercial hedging participants
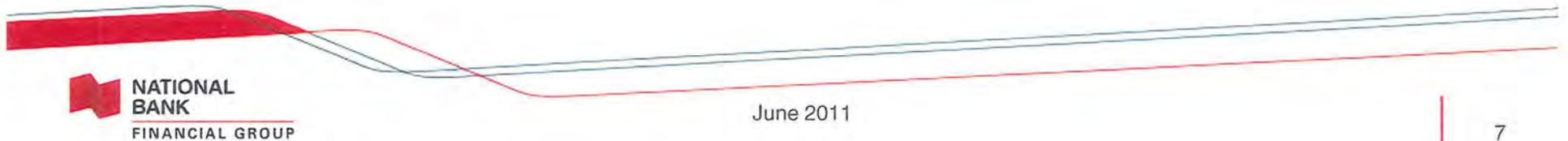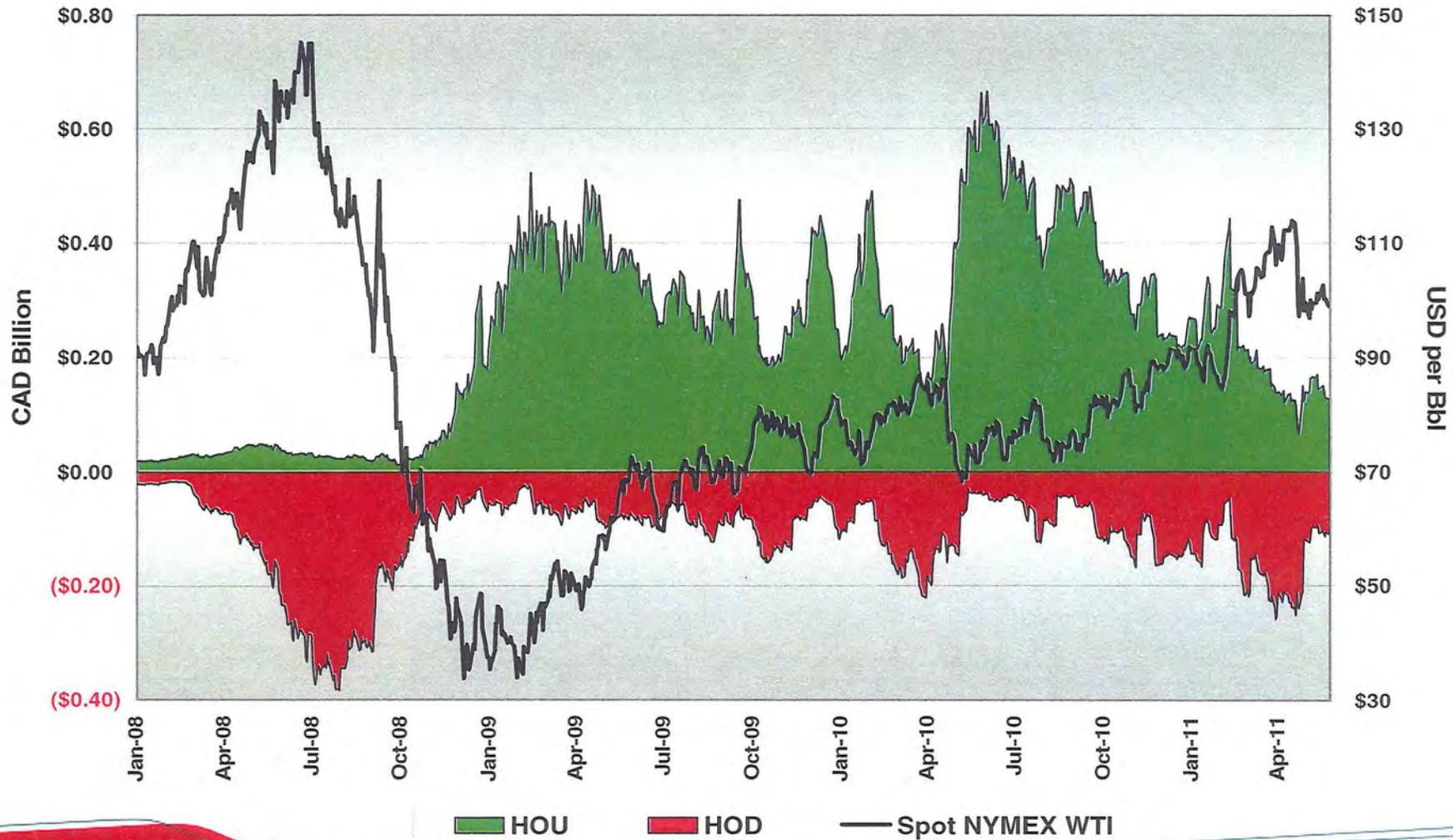
ETF Equivalent Futures Contract Positions vs. WTI Price

Total Crude Oil ETF Contracts versus Prompt WTI

Price Collapse, ETF Creation

Escalation in Price, ETF Redemptions

Escalation in Price, ETF Redemptions

Escalation in Price, NO ETF Creation

$1.6 billion of redemptions

Net Position: USO + HOU - HOD   Prompt Month WTI

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Relative Long/Short AUM For Horizons BetaPro WTI ETFs

Total AUM for HOU and HOD versus WTI

Legend: HOU (green), HOD (red), Spot NYMEX WTI (black line)

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Net Long/Short AUM for Horizons BetaPro WTI ETFs

Net HOU and HOD AUM vs WTI

Legend: NET HOU and HOD AUM — Spot NYMEX WTI

Annotations: "Short 3,660 futures contracts"; "Short 5,300 futures contracts"
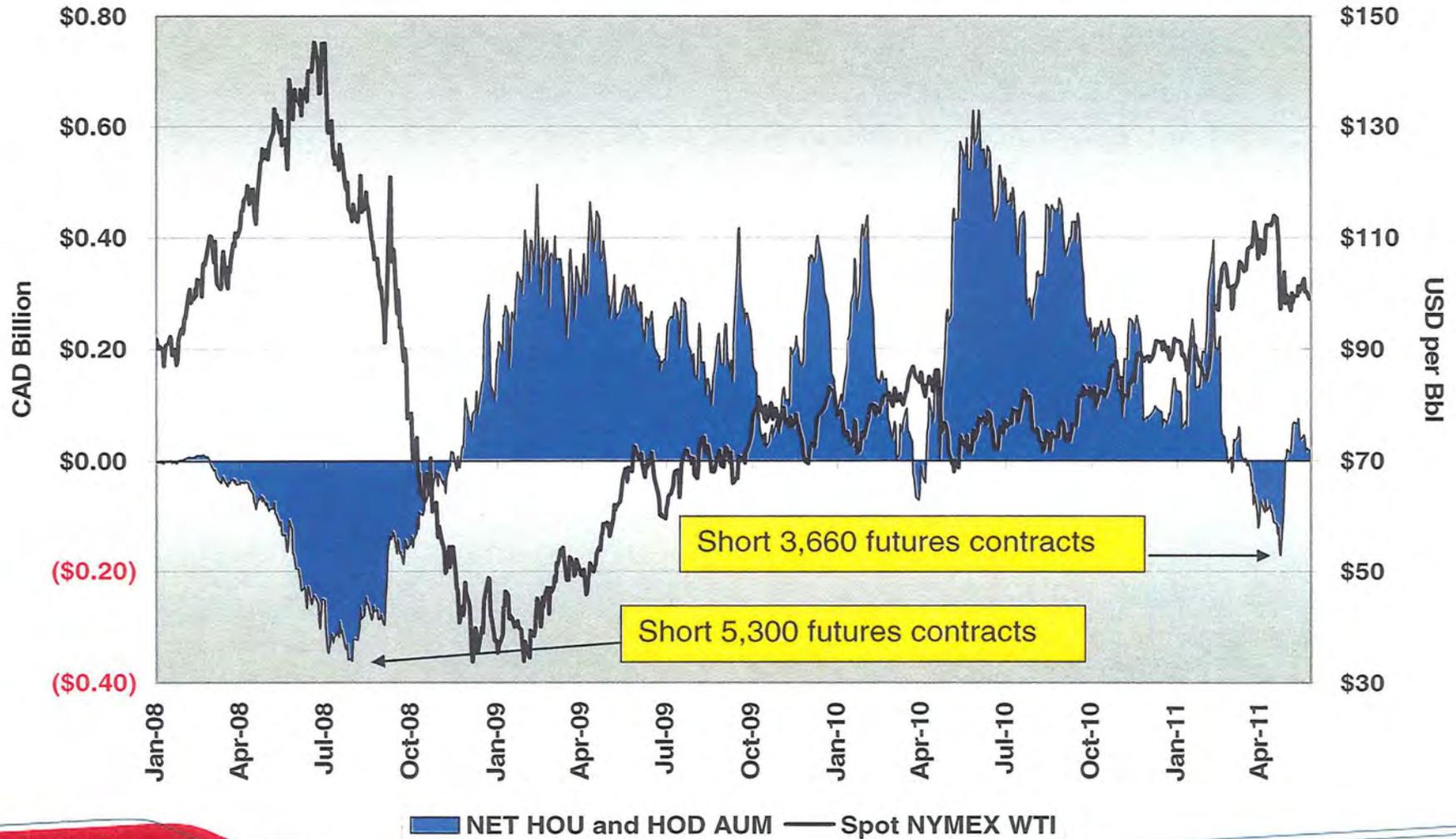
ETF Equivalent Futures Contract Positions vs. NYMEX NG Price

Total Natural Gas ETF Contracts versus Prompt NYMEX NG

Price Collapse, ETF Creation

Escalation in Price, NO ETF Creation

Escalation in Price, ETF Redemptions

Legend: ——Net Position: UNG + HNU - HND ——Prompt Month NYMEX NG

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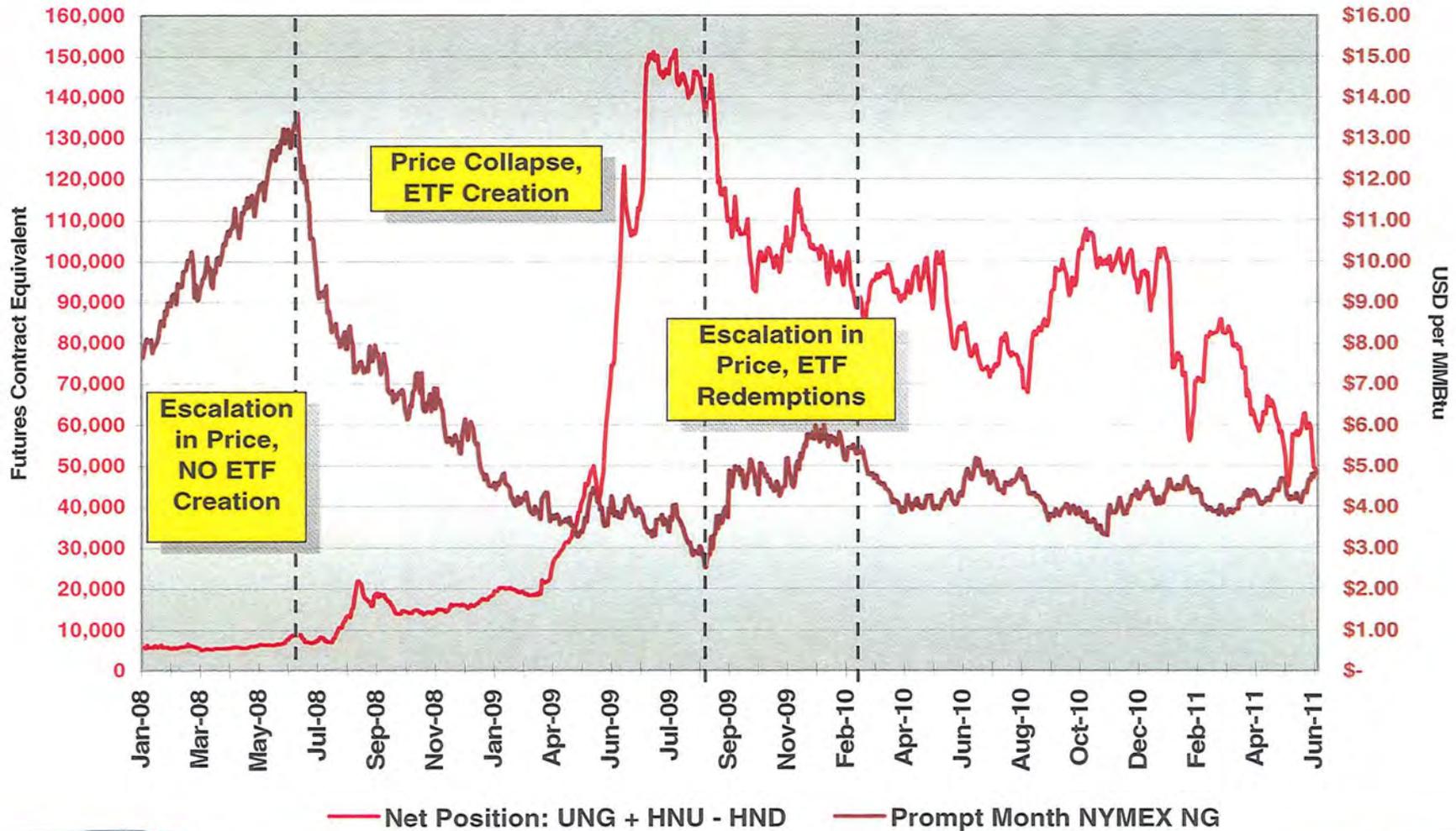
Relative Long/Short AUM For Horizons BetaPro NYMEX NG ETFs

Total AUM for HOU and HOD versus NYMEX NG

Legend: HNU (green), HND (red), Spot NYMEX NG (line)

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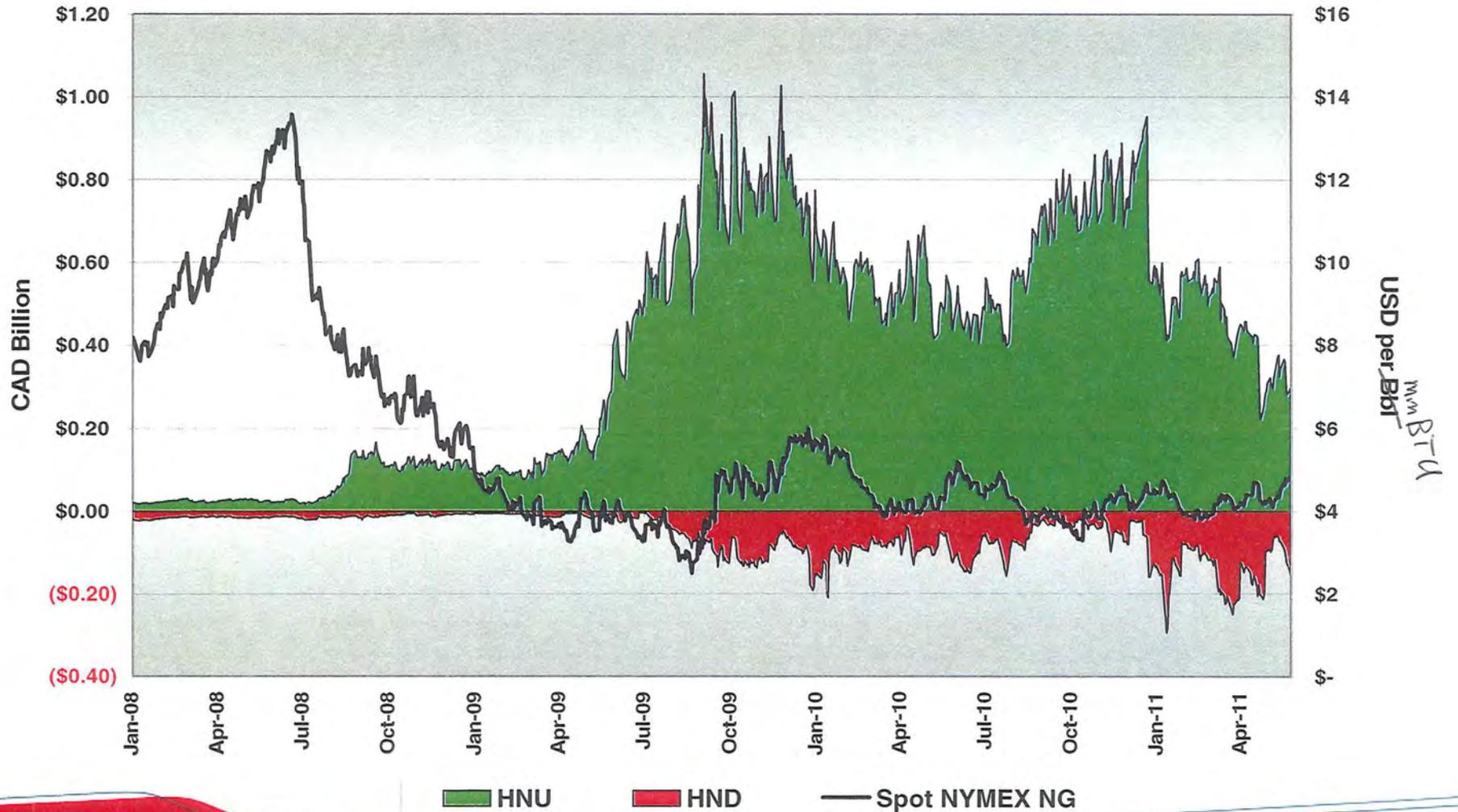
Net Long/Short AUM for Horizons BetaPro NYMEX NG ETFs

Net HOU and HOD AUM vs NYMEX NG

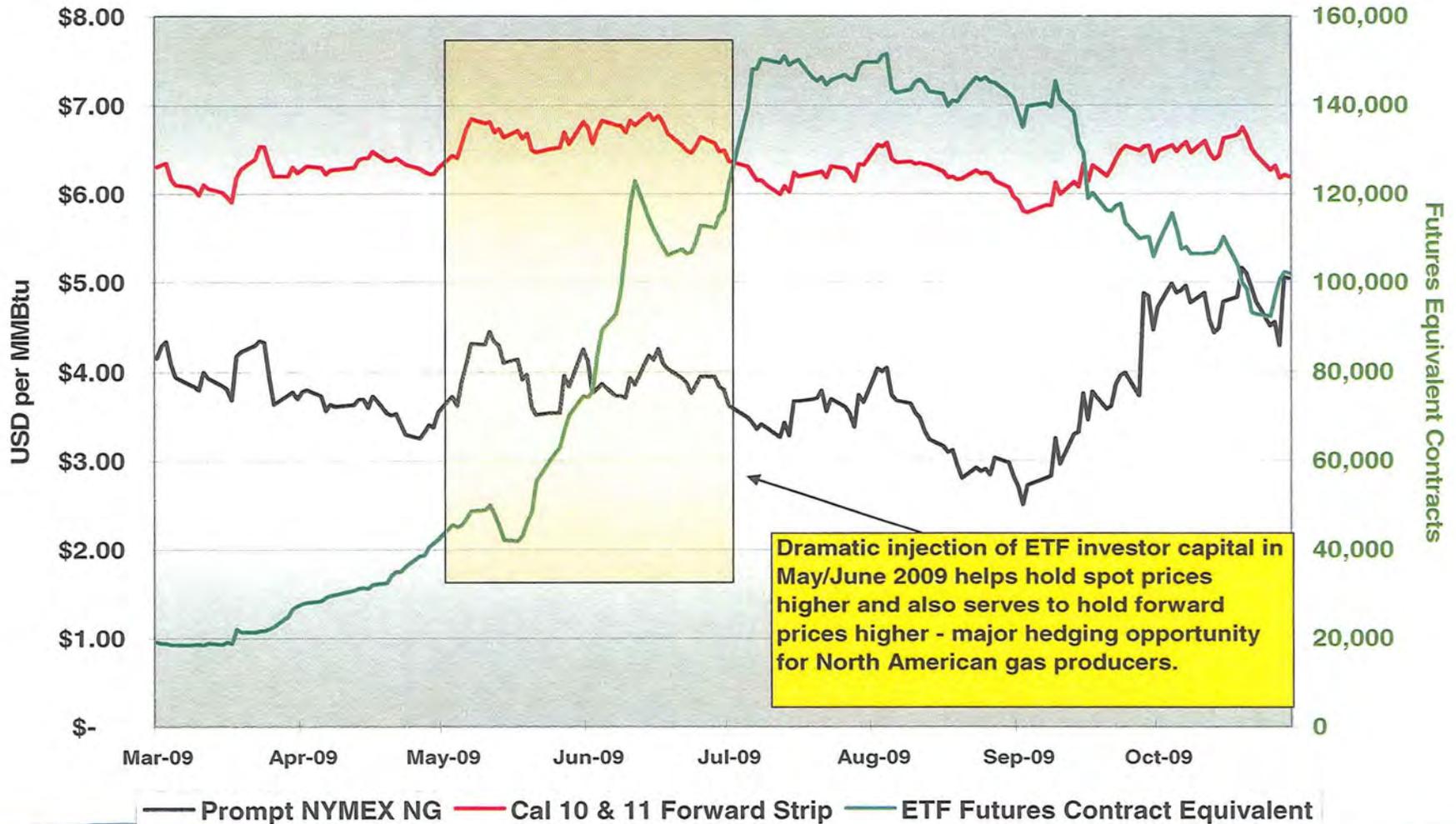Legend: NET HOU and HOD AUM — Spot NYMEX WTI

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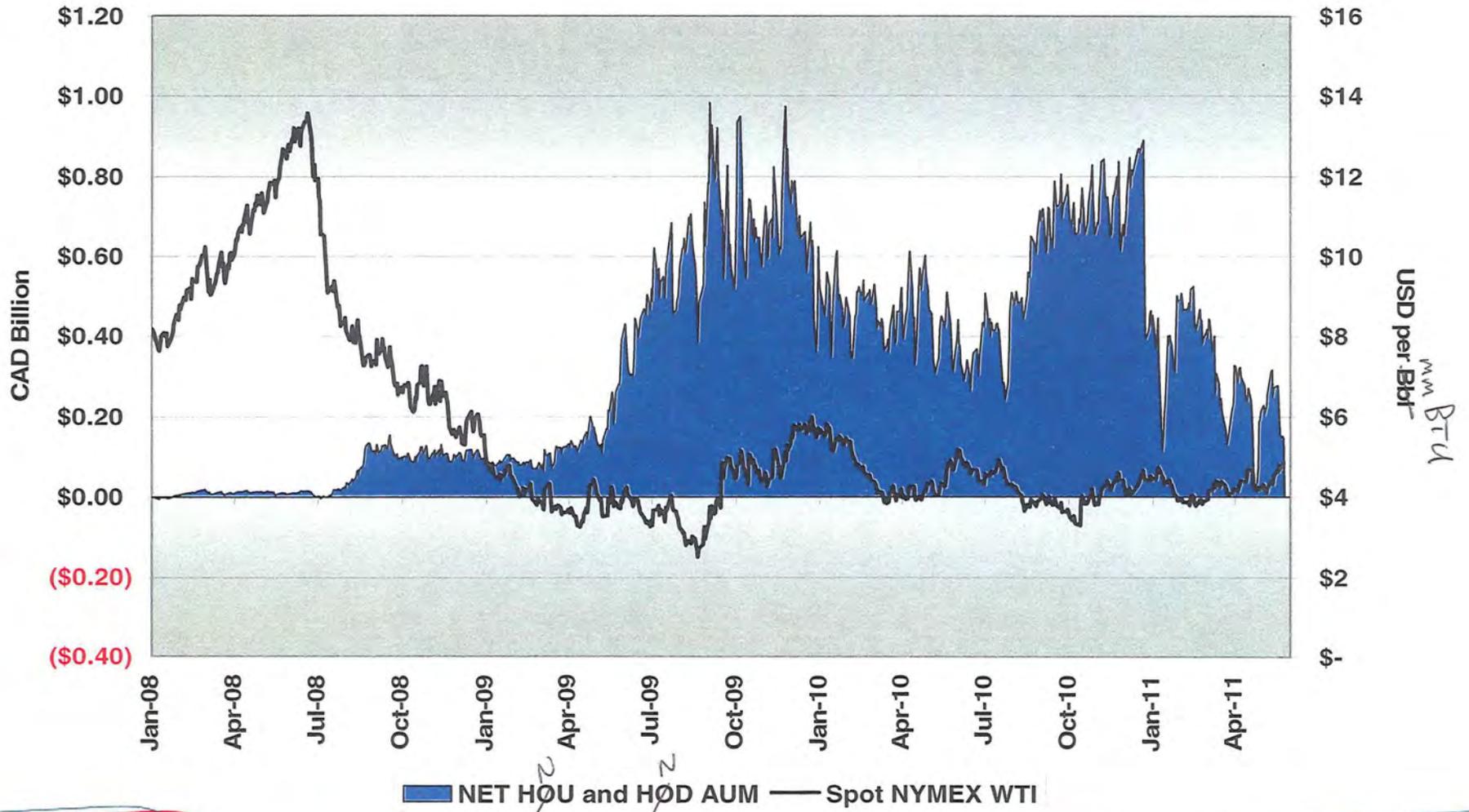
Positive Liquidity Impact

- Historical evidence does indicate that at times ETF investors have helped support oil and gas prices, BUT GENERALLY IN A DEPRESSED PRICING ENVIRONMENT
  - WTI between $35 - $50 in 2008/2009
  - Henry Hub natural gas below $4.00 in summer 2009, summer 2010 and again earlier this year
- Argument to be made that this is positive for medium-term energy security of supply
- 2009 scenario:
  - Over a two-month period, ETF investors inject close to $4 billion into the gas market, supporting both spot and forward prices
    - While ETF players are buying 1st or 2nd month contracts, their activity helps support the back end of the curve as well
  - Back-end support created an attractive opportunity for shale gas producers to hedge potential future production, enabling them to carry on with aggressive capital expenditure programs
  - End result is more gas available for North American consumers in the medium-term
  - Abundant gas and lower price environment today at least partially a function of these hedging opportunities, which in turn were heavily influenced by ETF buying support
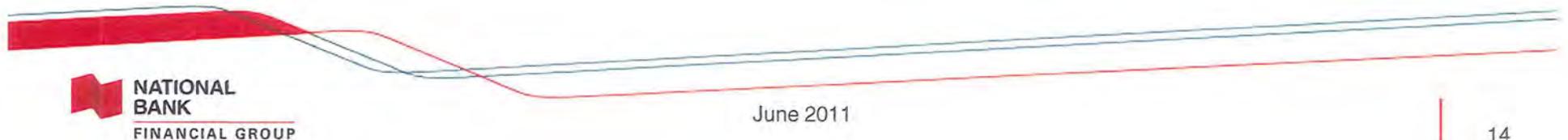
2009 Scenario: Material ETF Inflows Provide a Producer Hedging Opportunity

Prompt NYMEX NG, Cal 10 & 11 Forward Strip, and ETF Futures Holdings

Dramatic injection of ETF investor capital in May/June 2009 helps hold spot prices higher and also serves to hold forward prices higher - major hedging opportunity for North American gas producers.

Legend: Prompt NYMEX NG — Cal 10 & 11 Forward Strip — ETF Futures Contract Equivalent

Significant Uptick in Producer Hedging Activity in May/June 2009

Relative Monthly Producer NG Hedge Activity with NBC

Surge in hedging activity encouraged by the price-supportive action of ETF investors in a low-price environment.

Y-axis: Monthly % of 34-Month Total

X-axis: Jul-08, Aug-08, Sep-08, Oct-08, Nov-08, Dec-08, Jan-09, Feb-09, Mar-09, Apr-09, May-09, Jun-09, Jul-09, Aug-09, Sep-09, Oct-09, Nov-09, Dec-09, Jan-10, Feb-10, Mar-10, Apr-10, May-10, Jun-10, Jul-10, Aug-10, Sep-10, Oct-10, Nov-10, Dec-10, Jan-11, Feb-11, Mar-11, Apr-11
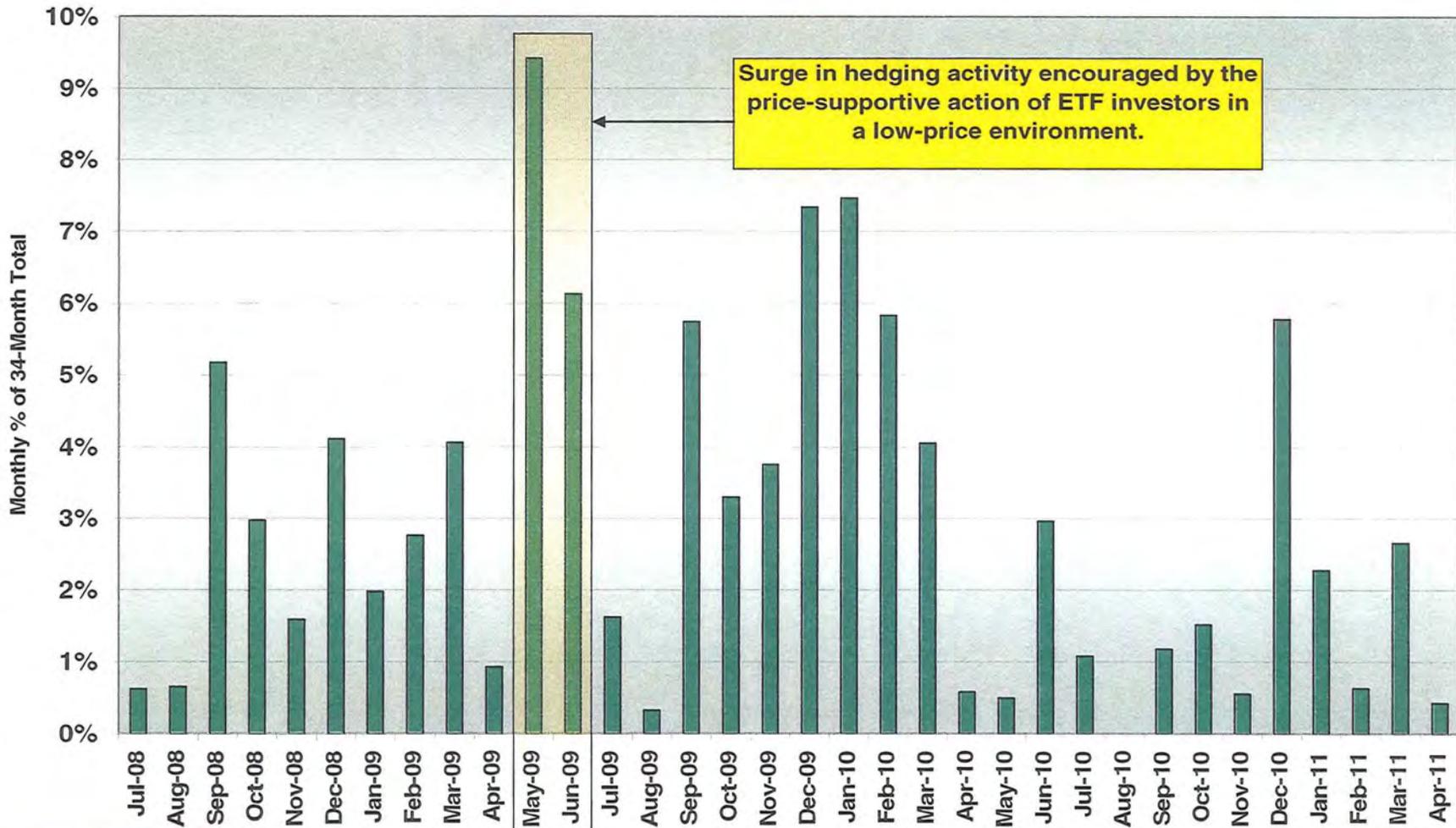
Final Comments

- No evidence showing that ETF investors are exacerbating energy market volatility or contributing to higher prices in a high-price environment
    - In fact, just the opposite
    - In general, energy ETF investors look for low-price environments to buy and high-price environments to sell
- ETF investor action over the past three years has contributed to a healthier hedging environment for gas producers, enabling them to expand the supply available to North American consumers
- ETF activity does not represent a single trading block, but instead the amalgamated activity of myriad investors with different price views
- Willingness on the part of ETF managers to disclose large positions still allows regulatory oversight of individual position limits
- Supports the exclusion of ETF manager and intermediary futures positions from limit calculations