

Стресс-тестирование торговых позиций

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Управление рисков***





Стресс-тестирование торговых позиций

План презентации:

- Исторические сценарии стресс-тестирования
- Примерные практические сценарии стресс-тестирования
- Лимиты на стресс-тест и риск-аппетит



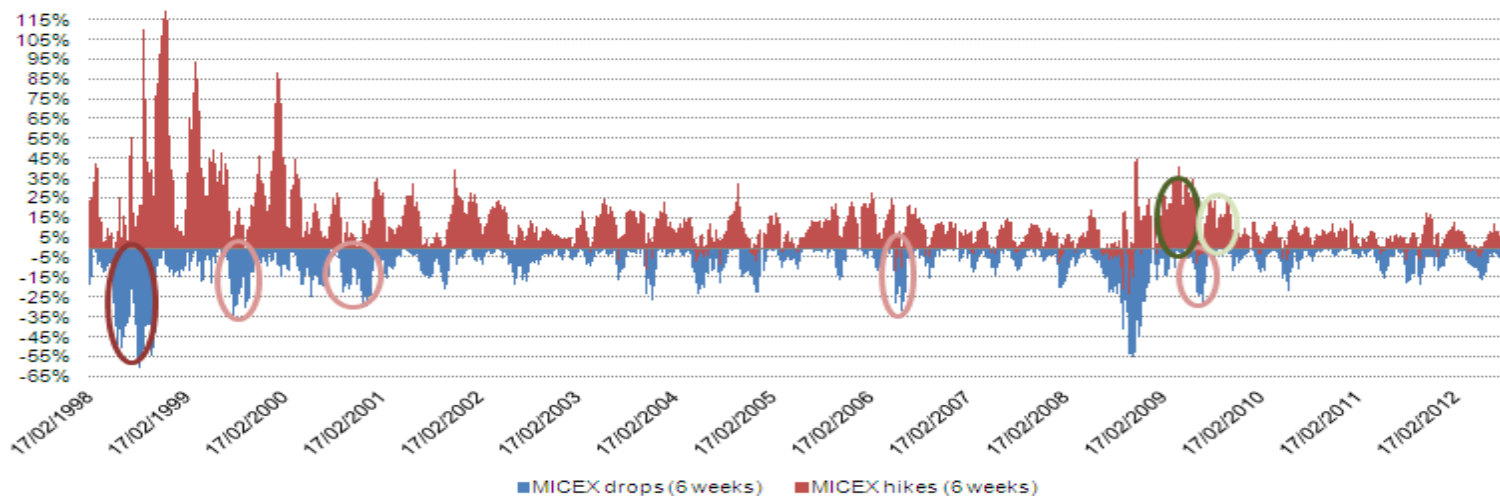
Исторические сценарии стресс-тестирования

- 1998: Внешний кризис + суверенный дефолт России
- 2008: Кризис ипотечных инструментов + дефолт Lehman Brothers
- 2010:
- 2011: Понижение кредитного рейтинга США
- 2013: Угроза прекращения QE3

Практические сценарии стресс-тестирования

- Масштаб стресс-событий
 - Средний (“moderate”): 2010-2011
 - Высокий (“severe”): 2008
- Направление
- Корреляция

Исторические сценарии стресс-тестирования: Акции

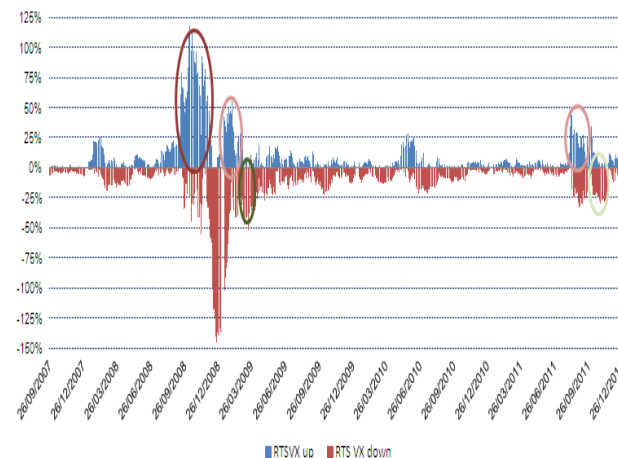


Severe stress (holding period – 6 weeks):

| | Downside | | Neutral | | Upside | |
|----------|-----------|---------|---------|---|-----------|---------|
| EM spot | from -50% | to -30% | - | - | from +25% | to +35% |
| DEV spot | from -30% | to +5% | - | - | from -5% | to +20% |
| EM vol | from +25% | to +60% | - | - | from -10% | to -25% |
| DEV vol | from -5% | to +30% | - | - | from -15% | to +5% |

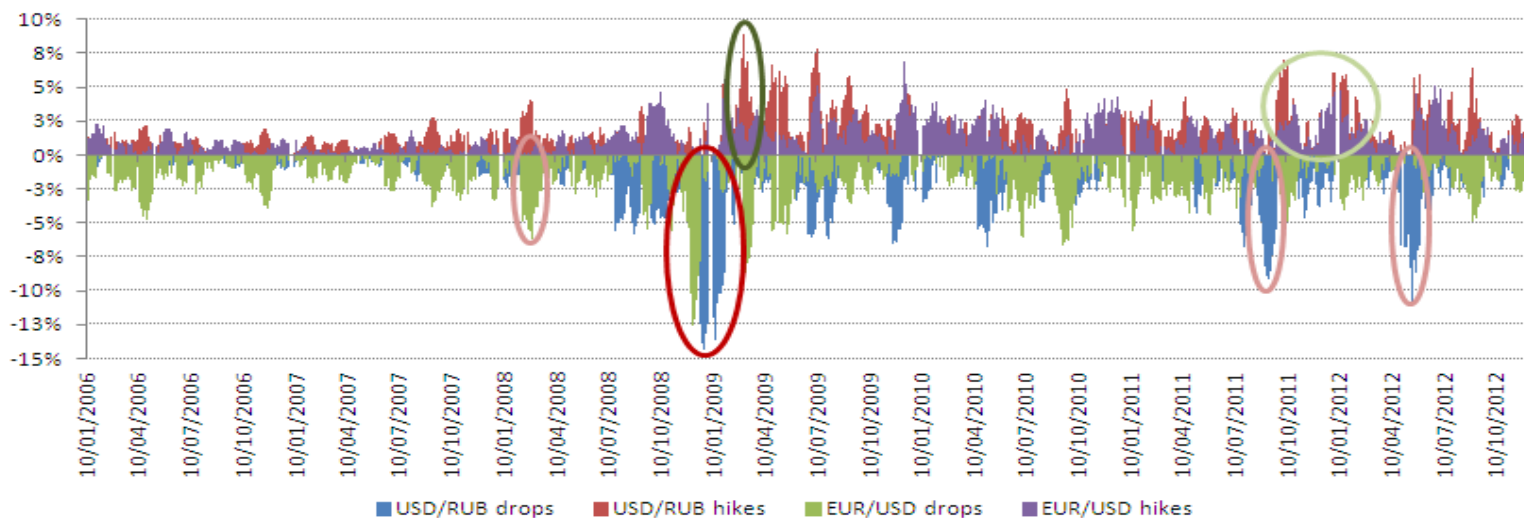
Moderate stress (holding period – 6 weeks):

| | Downside | | Neutral | | Upside | |
|----------|-----------|---------|-----------|---------|-----------|---------|
| EM spot | from -30% | to -20% | from -15% | to +10% | from +15% | to +20% |
| DEV spot | from -15% | to +5% | from -5% | to +10% | from -5% | to +10% |
| EM vol | from +15% | to +45% | from -5% | to +10% | from -10% | to -20% |
| DEV vol | from -5% | to +15% | from -10% | to +5% | from -10% | to +5% |



* Изменения за 6 недель

Исторические сценарии стресс-тестирования: Валютные курсы



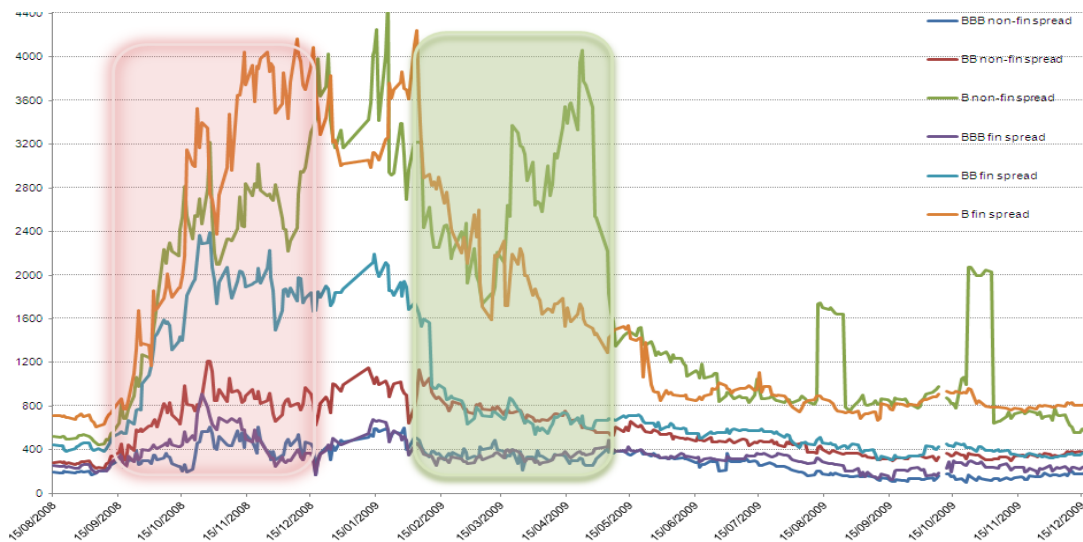
Severe stress (holding period – 3 weeks):

| | Downside | | Neutral | | Upside | |
|-------------|-----------|---------|---------|---|-----------|---------|
| FX RUB spot | from -15% | to -10% | - | - | from 8% | to +10% |
| FX RUB vols | from +10% | to +25% | - | - | from -15% | to -10% |
| FX EUR spot | from -13% | to -10% | - | - | from +5% | to +8% |
| FX EUR vols | from +10% | to +15% | - | - | from -15% | to -10% |
| FX CNY spot | from -10% | to +1% | - | - | from -1% | to +5% |
| FX CNY vols | - | - | - | - | - | - |

Moderate stress (holding period – 3 weeks):

| | Downside | | Neutral | | Upside | |
|-------------|-----------|------|----------|---------|-----------|--------|
| FX RUB spot | from -10% | -8% | from -5% | to +5% | from +5% | to +8% |
| FX RUB vols | from +10% | +15% | from -5% | to +10% | from -10% | to -5% |
| FX EUR spot | from -8% | -5% | from -4% | to +4% | from +3% | to +5% |
| FX EUR vols | from +5% | +10% | from -5% | to +5% | from 10% | to -5% |
| FX CNY spot | from -5% | +1% | from -5% | to +5% | from -1% | to +4% |
| FX CNY vols | - | - | - | - | - | - |

Исторические сценарии стресс-тестирования: Облигации



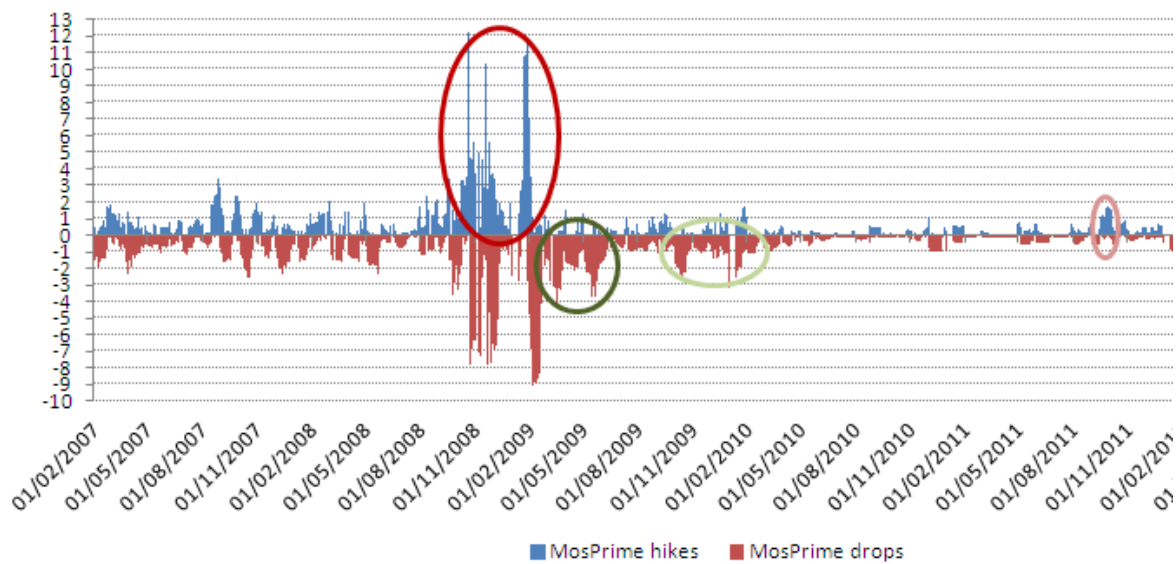
Severe stress (holding period – 12 weeks):

| RUB | Downside | Neutral | Upside |
|-------------------|-------------------------|---------|----------------------|
| BBB-fin spread | from +4.00% to +6.00% | - | from -2% to -1.50% |
| BB-fin spread | from +15.00% to +18.00% | - | from -3% to -2.00% |
| B-fin spread | from +23.00% to +30.00% | - | from -4% to -3.00% |
| BBB-nonfin spread | from +3.00% to +4.00% | - | from -2% to -1.50% |
| BB-nonfin spread | from +6.00% to +9.00% | - | from -2.5% to -1.50% |
| B-nonfin spread | from +17.00% to +21.00% | - | from -4% to -3.00% |
| OFZ base rate | from +2.00% to +4.00% | - | from -2% to +1.00% |

Moderate stress (holding period – 12 weeks):

| RUB | Downside | Neutral | Upside |
|-------------------|-----------------------|-----------------------|-----------------------|
| BBB-fin spread | from +1.00% to +2.00% | from -1.00% to +1.00% | from -1.50% to -1.00% |
| BB-fin spread | from +2.00% to +3.00% | from -1.00% to +1.50% | from -2.00% to -1.00% |
| B-fin spread | from +4.00% to +6.00% | from -1.50% to +2.00% | from -2.50% to -1.50% |
| BBB-nonfin spread | from +1.00% to +2.00% | from -1.00% to +1.00% | from -1.50% to -1.00% |
| BB-nonfin spread | from +2.00% to +3.00% | from -1.00% to +1.50% | from -2.00% to -1.00% |
| B-nonfin spread | from +4.00% to +6.00% | from -1.50% to +2.00% | from -2.50% to -1.50% |
| OFZ base rate | from +1.00% to +2.00% | from -1.00% to +1.00% | from -1.00% to +1.00% |

Исторические сценарии стресс-тестирования: Процентные ставки



Severe stress (holding period – 3 weeks):

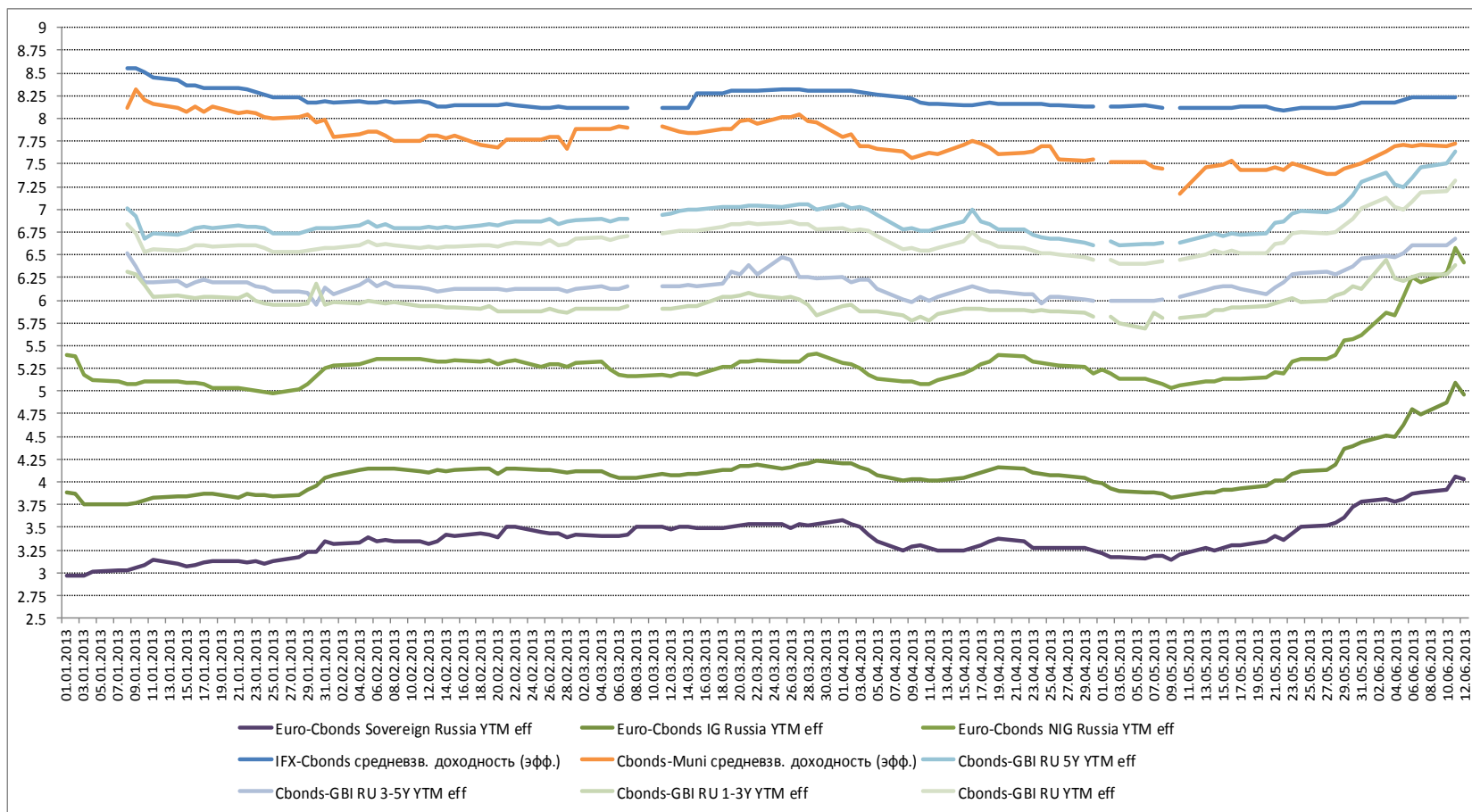
| | Downside | Neutral | Upside |
|--------|--------------------|---------|-----------------|
| IR RUB | from +8% to +10% | - | from -2% to +1% |
| IR USD | from -2% to +0.25% | - | from 0% to +2% |
| IR EUR | from -2% to +1% | - | from 0% to +3% |
| IR CNY | from +2% to +5% | - | from -2% to +3% |

Moderate stress (holding period – 3 weeks):

| | Downside | Neutral | Upside |
|--------|--------------------|-----------------|-----------------|
| IR RUB | from +2% to +3% | from -1% to +2% | from -1% to +1% |
| IR USD | from -1% to +0.25% | from 0% to +1% | from 0% to +1% |
| IR EUR | from -1% to +1% | from 0% to +2% | from 0% to +2% |
| IR CNY | from +1% to +3% | from -1% to +2% | from -1% to +2% |

Пример для размышления: Облигации в 2013 году

Yield Indices - Local Bonds (MICEX CBI, OFZ) vs Eurobonds (Euro-Cbonds)





Лимиты на стресс-тест и риск-аппетит

- Выбор сценариев
- Динамическое применение сценариев в зависимости от рыночной ситуации и риск-аппетита
- Определение лимитов на стресс-тест:
 - Функции показателей Организации:
 - Доля от прибыли
 - Доля от капитала
 - Доля от оборота
 - Прочее
 - Внешние ограничения:
 - Регуляторный капитал
 - Нормативы



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