IBM ELAs and Mainframe Capacity Planning

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Agenda

- Background information
- How are Mainframe costs affected by an ELA?
- What do you have to plan for?
- ELA Risk Summary
- Recommended practices

Background info

IBM Software types

Not Discounted

- MLC – Monthly License Charge
  - Licensed by capacity on a month by month basis
  - No up-front cost to acquire software
  - Support

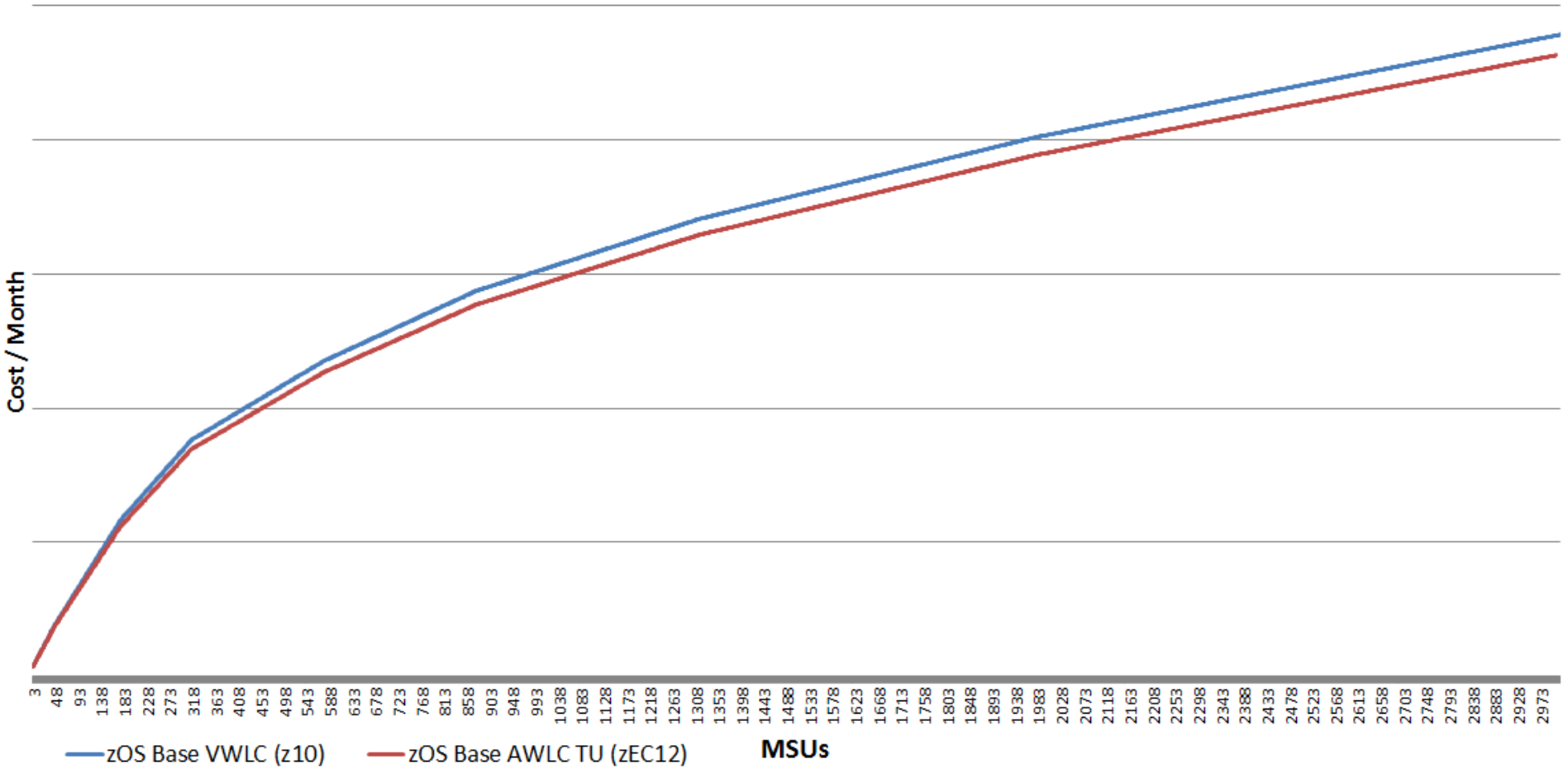
Discounts Offered

- zOTC – One Time Charge (IPLA)
  - One-time charge: up-front cost to acquire software, maintenance charged annually and entitles you to new versions
  - Support
- PPA - Passport Advantage
  - Non-mainframe software

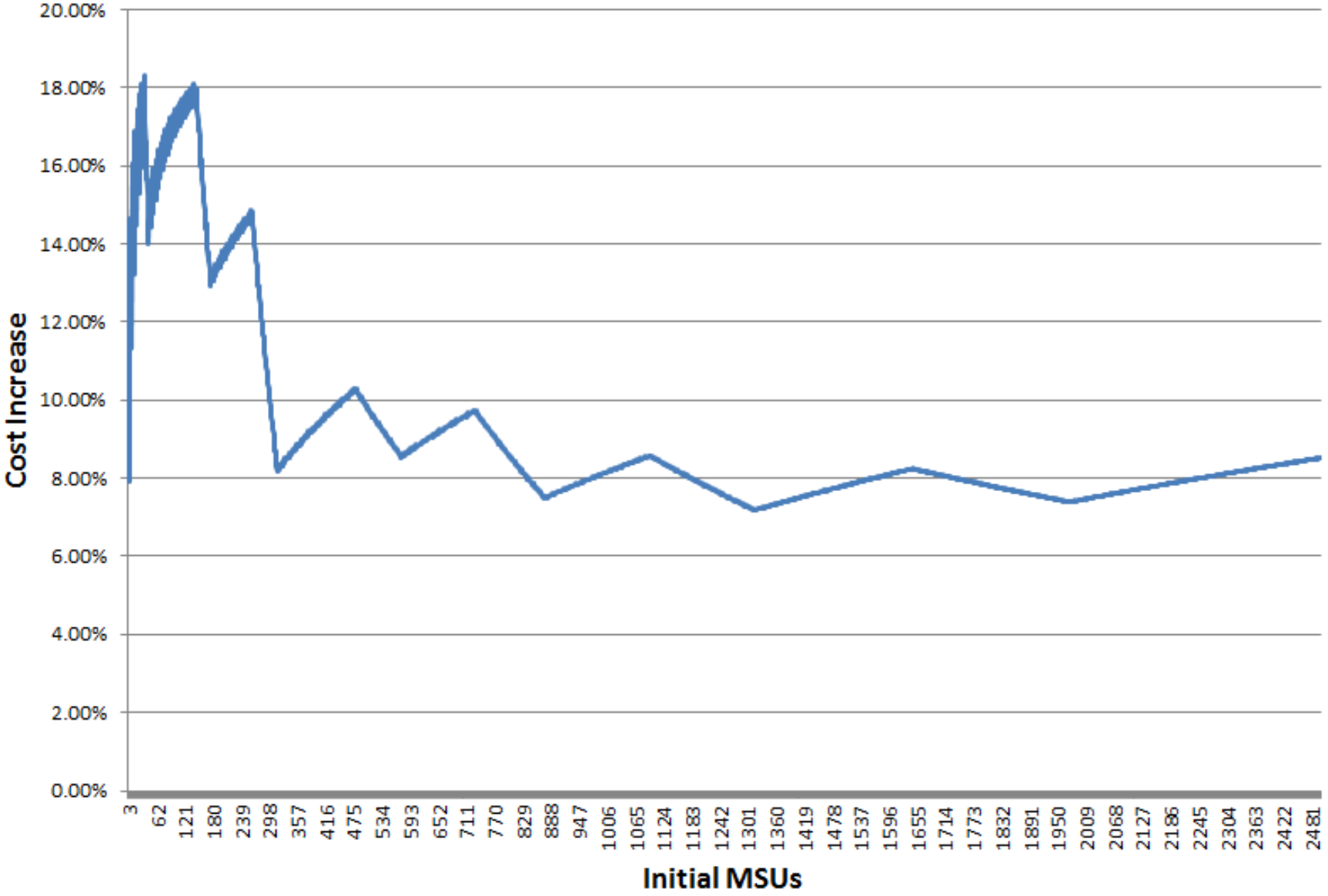
Sub-capacity pricing

- MLC has multiple pricing metrics, some of which are based on used capacity instead of installed capacity
  - In most cases, the Peak R4H – Rolling 4 hour Average utilization
- VWLC, AWLC, etc. can provide significant cost savings
  - Tens of thousands of dollars per month quite possible
  - Potential percentage savings higher for smaller shops than larger shops due to the MLC price curve
- Must be actively managed
  - Ongoing performance monitoring to balance costs with performance
  - Send usage data to IBM monthly
- Monthly MLC costs are variable based on the utilization two months prior
  - e.g. Jan usage sets March bill

MLC Price Curves



Percent Cost Increase to Increase Capacity 20%
(z/OS Base AWLC TU)



What is an IBM ELA

- In short: an agreement to purchase software over the course of the ELA
  - Helps with budgeting
- Typical ELA period is 1-3 years
- Covers entire IBM Software portfolio:
  - MLC (Mainframe Monthly License Charge)
  - zOTC (Mainframe One Time Charge)
  - PPA (Passport Advantage)

ELA Process

- Customer and IBM partner to estimates the “business as usual” IBM software costs over the ELA period
- IBM takes in to consideration the net new spend and applies a discount that number and to PPA and z/OTC maintenance
- Total number becomes the ELA amount

Why do an ELA?

- Levels the periodic payment to IBM
  - Total ELA spend is divided into level monthly, quarterly or yearly payments
- Helps with budgeting
- Potential for "Blue dollars" for acquiring new PPA or zOTC products

MLC Cost Impacts

How are Mainframe costs affected?

- Signing up for an ELA does *not* mean your MLC software is discounted
- MLC spend does impact level of discount IBM will provide on the total ELA spend
  - Interesting internal accounting question: should those discounts be spread to the mainframe cost pool?

MLC prices *are* published and available to you

MLC Tracking

- Because MLC is not discounted, IBM tracks the customer's actual MLC charges each month
  - Month to month charges may vary based on:
    - Usage (if doing sub-capacity pricing)
    - Customer changing software versions
    - Customer adding or removing software products
    - IBM price increases
- IBM account team periodically reviews with the customer

MLC True-up

- After each year of the ELA, the accumulated actual MLC charges are compared to what the customer actually paid
  - If accumulated MLC liability > what was paid, customer is billed for the difference
  - If accumulated MLC liability < what was paid, customer receives no refund
- Note that if you take action to reduce your MLC costs, you don't get any benefit from that
  - Unless you underpaid and you're reducing the true-up bill

This is all generally true, but ELAs are individually negotiated

Planning for an ELA

MLC Planning

- Ideally, you'd like to have paid IBM $1 too much
  - No bill from IBM, negligible over payment
  - This is difficult!
- All of the following impact the MLC costs over the ELA period and must be planned for, month by month:
  - Your installed / used MSU capacity
  - Hardware changes
  - Software version changes that trigger an upcharge
  - Software version migrations that exceed 12 months (SVC)
  - MLC inventory additions / deletions
  - Sub capacity pricing metric changes
    - Usually due to hardware generation change
  - Unannounced IBM price changes

Capacity planning

- If you're not using sub-capacity pricing WHY?
  - Need to determine if you're going to need to do a hardware upgrade during the ELA period
- If you're using sub-capacity pricing
  - Plan your capacity requirements month-by-month
    - Consider impact from: application changes, business changes, tuning efforts, new software releases, incidents
  - Convert to MSU consumption (taking into account any planned hardware changes)
  - Map the planned utilization month to the billing month

Hardware changes

- Hardware changes will possibly change:
  - How many MSUs it takes to run your workload
  - The pricing metric used to determine your MLC charges (e.g. move from VWLC to AWLC)
- Need to plan for when the changes will occur and the how much they will impact things
  - E.G. in one simulation I saw a 6% MSU increase (vs effective capacity) by moving a workload from zEC12 4xx to a 5xx
- When migrating from VWLC to AWLC, transitional pricing metrics may be involved

Software version changes

- MLC software that changes versions generally increases in price
  - E.G. going from version 4.2 to 4.3 generally does not change price, but moving to version 5 generally will
- 12 months of SVC (Single Version Charge)
  - Grace period within which you can have both the old and new version installed
  - Charged at the price of the new software
  - If not done in 12 months, charged for both versions!
- ELA plan needs to account for MLC software version changes (e.g. DB2 9 to DB2 10)
- If you think a conversion project will extend past SVC period, plan for that too!

Software retirements / additions

- MLC Inventory changes, although probably rare, need to be planned for
- Possible examples:
  - Are you going to retire the last PL/I application, and so retire the PL/I compiler?
  - Do you not have MQ on z/OS today, but you're planning on putting it there?
  - Are you going to migrate from a third party product to an IBM product such as RACF, RMM, DFSort, etc.?

Unannounced Price Changes

- Price changes rarely announced more than 6 months in advance of effective date
- Price changes used to be tied to version changes, but not necessarily so any more
  - New versions of some products (e.g. DB2) will be same as previous
  - But when will price increase on all versions?

ELA Risks

ELA Risks

- Can you accurately plan all of the previous over the required ELA period?
  - Planning likely starts 3-4 months before the ELA
  - Difficult to plan all those things across 15 months, let alone multiple years
- If you get it wrong, either:
  - You end up with a big bill from IBM
  - You paid IBM more than you should have

How far wrong can it go?

- For a 400 MSU site, incremental per-MSU cost may be on the order of $400/MSU
  - VWLC, for z/OS, DB2, CICS, MQ, QMF, compilers, etc.
- Consider being off by 5%
  - 5% of 400 = 20 MSUs = $8K/month = $96K/yr
- Difference between DB2 v9 and v10 at 400 MSUs is about $6K/month
  - Multiply by the number of months difference between when it was planned for and actually ordered
- But breaching SVC is worse: then you might be on the hook for DB2 v9 at some portion of $52K/month
  - Only order software when you're ready to start installing!

More subtle issues

- If something new comes along that could have reduced your MLC bill, you may not get any value from that until your next ELA
  - Unless you're on track to have to pay IBM money anyways
  - Common example: "technology dividend" of moving to latest machines
    - If you're stuck in an multiple-year ELA this may make it harder to cost-justify upgrading to the latest hardware
- Planning your software upgrades for a particular month a year or more in advance may lock you into a schedule that doesn't fit changing business needs

Recommended Practices

Educate Everybody

- ELAs are Big Deals involving lots of Important People
  - Most of the people involved probably don't understand everything we just talked about
- The capacity planner needs to be closely involved in the process
- The performance people need to be involved if using sub-capacity pricing
- You need to educate everybody about providing accurate upgrade plans
  - IBM-lead discussions may gloss over this point:
    - Customer: "Yeah we'll do an upgrade sometime in the next 2 years"
    - IBM: "I'll put it down for 6 months from now just to be safe."
    - Customer: "Sure, that sounds great, I'd really like to get that in."

    That's a recipe for overpaying if really it's not going to go in for 10-12 months!
- Somebody needs to understand IBM MLC pricing in detail
  - Capacity planner may be a good person to task with this

Plan Carefully

- If you don't plan, you will either significantly overpay or owe IBM significant money
  - The bill will likely need to be explained
- Plot out all the moving parts, by month:
  - Capacity requirements
  - Software upgrades
  - Hardware upgrades
  - Software additions and retirements
  - Software price changes (announced or not)

Manage Your R4H

- Use Group Capacity Limits (Soft Cap)
  - Key to keeping your R4H somewhat predictable
- Make sure your WLM policy is good
  - Capping will hurt somebody, make sure it hurts the right somebody
- Consider WLM Resource Groups
  - May help protect the R4H from low-importance workloads in shoulder times
- Monitor the systems and be prepared to adjust caps to meet necessary performance goals
  - Must balance performance vs. ELA impact

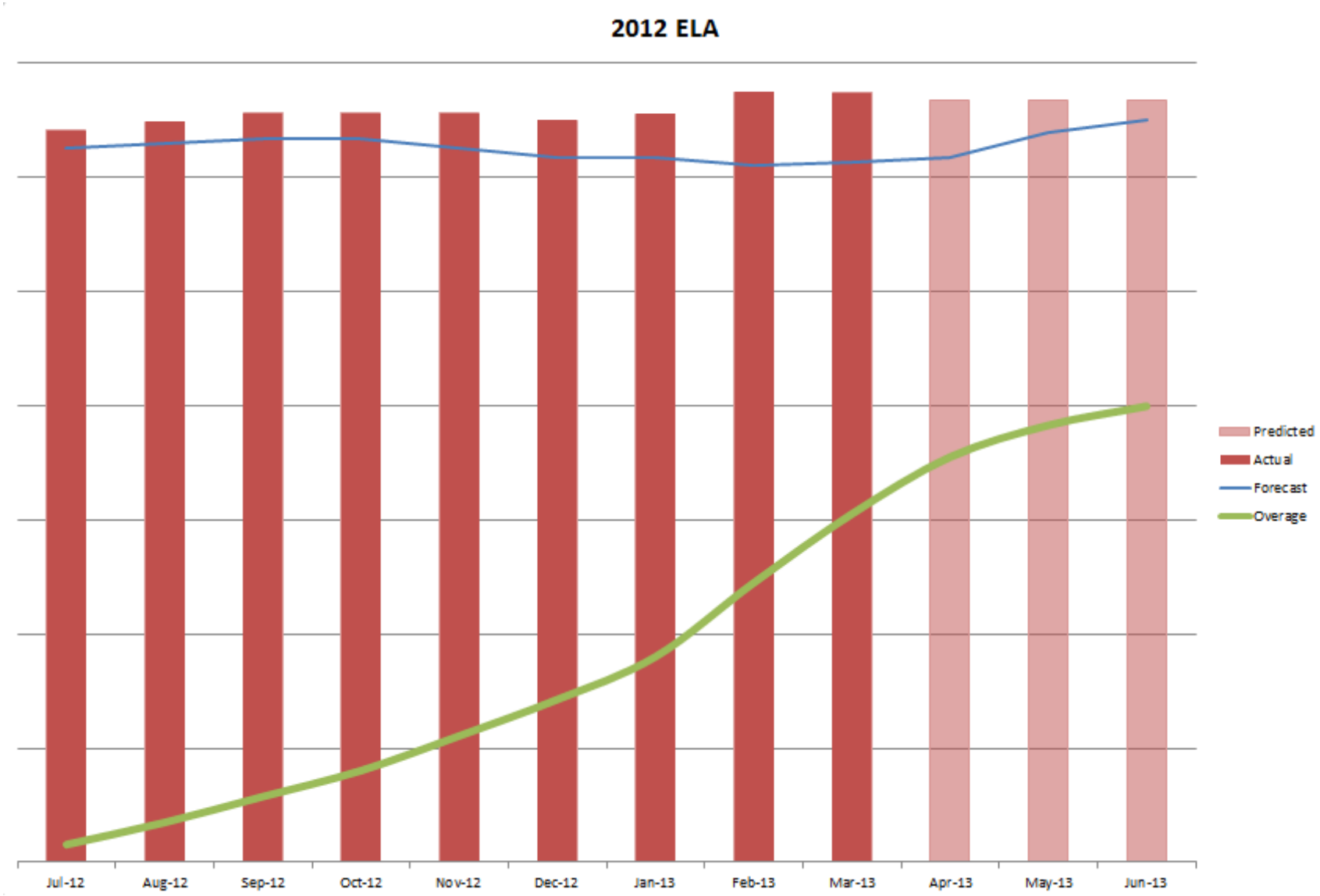
Aim to Underpay (slightly)

- IBM ELAs are worse than the IRS
  - You don't get a refund if you send IBM too much money each month!
- Make sure the Important People understand that there will likely be a true up payment every year
  - Explain how it's better to delay payment, rather than over pay
  - Or maybe they'd prefer you over pay because they really don't like uncertainty
- Either way, plan carefully to minimize the variance

Track it

- Your IBM account team should provide you with monthly or quarterly variance reporting
- But also track the details yourself
  - Doesn't hurt to double-check IBM's math
  - You may want to do your own projections
  - Probably should be done by whoever best understands the overall environment

Even better, make a picture…



Avoid multi-year ELAs

- Even a single-year ELA involves substantial planning risk
- Multi-year ELAs may lock you into a technology plan that may not make much sense a year from now
- Given the additional risk, there should be some significant reward for signing a multi-year ELA

Summary

ELAs require significant planning

- If you don’t plan your ELA carefully, you will be unhappy one way or the other
- ELAs are significant capacity planning exercises
- Make sure everybody understands how the ELA works
- Track your progress during the ELA
- Manage your R4H

Reference links

- zPricing
  - http://www-03.ibm.com/systems/z/resources/swprice/
  - VU converter tool
- Software Support
  - http://www-304.ibm.com/support/customercare/sas/f/handbook/offerings.html

THANK YOU

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