

5dZY`a Uf_h]b`B Ui a Vi f[. '9bhXYW_Yb`G]Y
%) \$`Gc fhYb`i bX`_Ògh`]W\ Y`GdYn]U`]hÀhYb`°

ϕ`B Ui a Vi f[`XfY`h'g]W\ `Ua`K`cW\YbYbXY`U`Yg`i a`Y`dZY`.
9i dYfhYbž%) \$`Gc fhYb`i bX`_Ògh`]W\ Y`GdYn]U`]hÀhYb`Yfk UfhYb
X]Y`6Ygi W\ Yf"

B Ui a Vi f[ž`8Yi hgW\`UbX`!`ϕ`B Ui a Vi f[ž`@UbX_fY]g`?UggY`ž
XfY`h'g]W\`Ub`X]YgYa`K`cW\YbYbXY`U`Yg`i a`XYb`5dZY`°`8]Y
<Ygg]gW\Yb`Dca`c`c[YbhU[Y`c`W_Yb`a`]h`Y]bYf`VYY]bXfi`W_YbXYb
J]Y`ZU`h`j`cb`Yhk`U`%) \$`5dZY`gc fhYbž`XUfi`bhYf`Ui`W\`F`Uf]hÀhYb`k`JY
XYf`GYYghYfa`Ø\Yf`N]hfc`bYbUdZY`i`bX`XYf`?U]gYf`K`J`\Y`a`":`Øf
C`VghV`Ui`a`!`@YV\`UVYf`i`bX`ϕ`hYfYgg]YfhY`V]YhYb`9i`dYfhYb`Y]bY
gdUbbYbXY`A`Ò[`]W\`_Y]h`6Ygi`W\`Yf`_ÒbbYb`V]g`ni`Z`ØbZ`Y`dZY`Ui`g
J]\fYa`Y]a`]gW\Yb`;`UfhYb`ni`f`6Ygh]a`a`i`b[`a`]hVf]b[`Yb`i`bX
YfZU\`fYb`gc`ž`k`Y`W\`Y`Gc`fhY`g]Y`\`UVYb`"8]Yg`_c`ghYh`YX][`]W\`XfY]
9i`fc`d`fc`Gc`fhY`ž`i`bX`b`UW\`XYf`6Ygh]a`a`i`b[`Yf\`U`hYb`X]Y
HY]`bY\`a`Yf`Y]b`NYfh]Z`_Uh"

?i`]bUf]gW\`k`]fX`YVYbZU`g`Y]b`<][`\`][`\h[`YVchYb.`5i`ZXYa
5dZY`a Uf_h`ghY`Yb`@YW_YfY]Yb`k`JY`?Ufhc`ZY`di`ZYf`a`]h`5dZY`a`i`gž
WfYa`][`Y`?ØfV]g!5dZY`!Gi`ddY`i`bX`YfZf]gW\YbXYf`?`ÀgY!5dZY`!GU`Uh
Ui`ZXYa`A`YbØ`"8Yf`9]bhf]hgd`fY]g`VYhfÀ[`h`ž`\$`9i`fc`ž`k`À\`fYbX`U`Y`
V]g`%*`↵\`fY`_c`ghYb`c`g`hY]`bY\`a`Yb`_ÒbbYb`"9]b`K`cW\YbYbXY
j`c`Yf`5dZY`[`Ybi`gg`i`bX`9i`dYfhYb`k`]ggYb`k`UfhYh`Ui`Z`X]Y`6Ygi`W\`Yf"
A`Y\`f`ϕ`Zc`fa`Uh]cbYb`g]bX`ni`Z]bXYb`VY]`k`k`k`"ZZ\`"XY"

8YhU]`g	
C fh	B Ui a Vi f[ž`8Yi hgW\`UbX

6Ygi W\Yb`G]Y`i bg`Ui Z.`b!U["XY